中国科学院数学与系统科学研究院

“随机分析及其应用”青年学者研讨会

（2015 年 12 月 17－20 日）

会议手册

会议地点：中科院数学与系统科学研究院南楼

合办单位：中科院随机复杂结构与数据科学重点实验室

中科院数学与系统科学研究院随机分析中心

组织委员会： 巩馥洲、骆顺龙、董昭、李向东、夏建明

联络人：宋永生 18600218610、夏建明 13621202322

目录

会程概览

12 月 18 日（周五） 南楼 204	12 月 19 日（周六） 南楼 219	12 月 20 日（周日） 南楼 204
08:20 – 08:40 注　册	08:20 – 08:30 注册	08:20 – 08:30 注册
08:40 – 08:50 开幕式	主持：应坚刚	主持：李应求
主持：张立新	08:30 – 09:05 刘再明	08:30 – 09:05 邵井海
08:50 – 09:25 江一鸣	09:05 – 09:40 周　川	09:05 – 09:40 徐方军
09:25 – 10:00 宋玉林	09:40 – 10:15 宋永生	09:40 – 10:15 刘广应
10:00 – 10:15　合影		
10:15 – 10:45　茶歇	10:15 – 10:45　茶歇	10:15 – 10:45　茶歇
主持：董　昭	主持：向开南	主持：邵井海
10:45 – 11:20 朱蓉禅	10:45 – 11:20 何　辉	10:45 – 11:20 陈　昕
10:20 – 11:55 朱湘禅	10:20 – 11:55 孙晓斌	10:20 – 11:55 罗德军
11:55 – 14:00　午餐	11:55 – 14:00　午餐	11:55 – 14:00　午餐
主持：宋永生	主持：刘再明	主持：徐方军
14:00 – 14:35 陈　晔	14:00 – 14:35 程　雪	14:00 – 14:35 章复熹
14:35 – 15:10 史敬涛	14:35 – 15:10 赵慧敏	14:35 – 15:10 赵国焕
15:10 – 15:45 吴盼玉	15:10 – 15:45 周德清	15:10 – 15:45 许明宇
15:45 – 16:15　茶歇	15:45 – 16:15　茶歇	15:45 – 16:15　茶歇
主持：刘　勇	主持：王文胜	主持：李向东
16:15 – 16:50 王立飞	16:15 – 16:50 蔡　亮	16:15 – 16:50 巫　静
16:50 – 17:25 李利平	16:50 – 17:25 李　楠	16:50 – 17:25 解永晓
17:30　晚餐	17:30　晚餐	17:30　晚餐

会程概览

会议日程

2015 年 12 月 18 日（周五） 数学院南楼 204 室		
时　间	会议内容	主持人
08:20 – 08:40	注册	
08:40 – 08:50	开幕式	夏建明
08:50 – 09:25	江一鸣（南开大学） Stochastic partial differential equations with space-time fractional noises	张立新
09:25 – 10:00	宋玉林（南京大学） Density functions of the Supremum of Wiener-Poisson Functionals	
10:00 – 10:15	合影	
10:15 – 10:45	茶歇	
10:45 – 11:20	朱蓉禅（北京理工大学） A Wong-Zakai theorem for Φ^4_3 model	董　昭
11:20 – 11:55	朱湘禅（北京交通大学） Lattice approximations to the dynamical Φ^4_3 model	
11:55 – 14:00	午餐	
14:00 – 14:35	陈　晔（湖南文理学院） Research on occupation times for diffusion processes	宋永生
14:35 – 15:10	史敬涛（山东大学） Leader-Follower Stochastic Differential Game with Asymmetric Information and Applications	
15:10 – 15:45	吴盼玉（山东大学） Several limit theorems under non-additive probability space	
15:45 – 16:15	茶歇	
16:15 – 16:50	王立飞（河北师范大学） Fukushima type decomposition for semi-Dirichlet forms	刘　勇
16:50 – 17:25	李利平（中国科学院数学与系统科学研究院） On structure of regular subspaces of 1-dim Brownian motion	
17:30	晚餐	

2015 年 12 月 19 日（周六） 数学院南楼 219 室		
时 间	会议内容	主持人
08:20 – 08:30	注册	
08:30 – 09:05	刘再明（中南大学） Heavy-traffic asymptotics of a priority polling system with threshold service policy	应坚刚
09:05 – 09:40	周　川（中国科学院信息工程研究所） 大规模网络上的影响最大化问题研究	
09:40 – 10:15	宋永生（中国科学院数学与系统科学研究院） G-Expectation Weighted Sobolev Spaces, Backward SDE and Path Dependent PDE	
10:15 – 10:45	茶歇	
10:45 – 11:20	何　辉（北京师范大学） On large deviation probability for branching random walks in Schr\"oder case	向开南
11:20 – 11:55	孙晓斌（江苏师范大学） Smoothness of the joint density for spatially homogeneous SPDEs	
11:55 – 14:00	午餐	
14:00 – 14:35	程　雪（北京大学） Optimal execution with uncertain order fills in Almgren-Chriss framework	刘再明
14:35 – 15:10	赵慧敏（中山大学） Market Excess Return, Variance and the Third Cumulants	
15:10 – 15:45	周德清（中央财经大学） TBA	
15:45 – 16:15	茶歇	
16:15 – 16:50	蔡　亮（北京理工大学） The generalized Wigner-Yanase-Dyson skew information revisited	王文胜
16:50 – 17:25	李　楠（中国科学院数学与系统科学研究院） Fisher-symmetric informationally complete measurements for pure states	
17:30	晚餐	

2015 年 12 月 20 日（周日） 数学院南楼 204 室		
时 间	会议内容	主持人
08:20 – 08:30	注册	
08:30 – 09:05	邵井海（北京师范大学） Algebraic stability of non-homogeneous regime-switching diffusion processes	李应求
09:05 – 09:40	徐方军（华东师范大学） Density convergence in the Breuer-Major theorem for Gaussian stationary sequences	
09:40 – 10:15	刘广应（浙江大学） Multipower variation from generalized difference for fractional integral processes	
10:15 – 10:45	茶歇	
10:45 – 11:20	陈 昕（上海交通大学） The navier-stokes equation and forward-backward stochastic differential systems	邵井海
11:20 – 11:55	罗德军（中国科学院数学与系统科学研究院） A note on Constantin and Iyer's representation formula for the Navier--Stokes equations	
11:55 – 14:00	午餐	
14:00 – 14:35	章复熹（北京大学） 改良分支随机游动的离散型 Liouville quantum gravity 度量	徐方军
14:35 – 15:10	赵国焕（北京大学） Weak solutions to SDEs driven by jump processes with irregular drift and H\"older regularity of their harmonic functions	
15:10 – 15:45	许明宇（中国科学院数学与系统科学研究院） Superhedging with Ratio Constraint	
15:45 – 16:15	茶歇	
16:15 – 16:50	巫 静（中山大学） On approximate continuity and the support of reflected stochastic differential equations	李向东
16:50 – 17:25	解永晓（山东师范大学） TBA	
17:30	晚餐	

报告摘要（按报告人姓名拼音顺序排列）

The generalized Wigner-Yanase-Dyson skew information revisited
蔡亮（北京理工大学）

In 2008, Chen and Luo has generalized the Wigner-Yanase-Dyson skew information in the direct way, according to the classical definition of Fisher information

$$I_{\alpha,\beta}(\rho,H)=-\frac{1}{2}\mathrm{Tr}[\rho^{\alpha},H][\rho^{\beta},H]\rho^{1-\alpha-\beta}$$

From then on, Many authors including Cai, Luo and Yanagi have discussed its convexity, superadditivity and related Heisenberg uncertainty principle. In this talk, we will give a more generalized Wigner-Yanase-Dyson skew information in the same spirit

$$I_{\alpha,\beta,\gamma}(\rho,H)=-\frac{1}{2}\mathrm{Tr}[\rho^{\alpha},H]\rho^{\gamma}[\rho^{\beta},H]\rho^{1-\alpha-\beta-\gamma}$$

.

And we will also give a discussion about its convexity, superadditivity and related Heisenberg uncertainty principle.

The navier-stokes equation and forward-backward stochastic differential systems
陈昕（上海交通大学）

Using stochastic forward-backward differential system, we will give the representations for Navier-Stokes equation, stochastic Navier stokes equation and Navier-Stokes equation on Riemannian manifolds. In particular, a kind of backward stochastic differential equations on Riemannian manifolds are introduced.

Research on occupation times for diffusion processes
陈晔＊（湖南文理学院）、李应求

For a < r < b, the approach of Li and Zhou (2014) is adopted to find joint Laplace transforms of occupation times over intervals (a, r) and (r, b) for a time homogeneous diffusion process before it first exits from either a or b. We also apply the same approach to find expressions of potential measures that are discounted by their joint occupation times over semi-infinite intervals (-\infinity, a) and (a, +\infinity) for homogeneous diffusion processes. The results are expressed in terms of solutions to the differential equations associated with the diffusions generator. Applying these results, we obtain more explicit expressions on the occupation times for Brownian motion with drift, Brownian motion with alternating drift, skew Brownian motion and Brownian motion with two-valued drift, respectively.

Optimal execution with uncertain order fills in Almgren-Chriss framework
程雪（北京大学）

The classical price impact model of Almgren and Chriss is extended to incorporate the uncertainty of order fills. The extended model can be recast as alternatives to uncertain impact models and stochastic liquidity models. Optimal strategies are determined by maximizing the expected final P&L and various P&L-risk tradeoffs including utility maximization. Closed form expressions for optimal strategies are obtained in linear cases. The results suggest a type of adaptive VWAP, adaptive POV and adaptive Almgren-Chriss strategies. VWAP and classical Almgren-Chriss strategies are recovered as limiting cases with different characteristic time scale of liquidation for the latter.

On large deviation probability for branching random walks in Schr\"oder case
何辉（北京师范大学）

It is well-known that the branching random walk over its total mass converges to a Gaussian measure or stable measure. In this work we investigate the convergence rates of such limit theorems.

Stochastic partial differential equations with space-time fractional noises
江一鸣（南开大学）

We consider a class of stochastic partial differential equations (SPDEs) driven by space-time fractional noises. We mainly study the existence and uniqueness of solutions to the SPDEs, and the regularity of the solutions.

On structure of regular subspaces of 1-dim Brownian motion
李利平（中科院数学与系统科学研究院）

The main purpose of this paper is to explore the structure of regular subspaces of 1-dim Brownian motion. As outlined in \cite{FMG} every such regular subspace can be characterized by a measure-dense set G. When G is open, $F=G^c$ is the boundary of G and, before leaving G, the diffusion associated with the regular subspace is nothing but Brownian motion. Their traces on F still inherit the inclusion relation, in other words, the trace Dirichlet form of regular subspace on F is stall a regular subspace of trace Dirichlet form of one-dimensional Brownian motion on F. Moreover we have proved that the trace of Brownian motion on F may be decomposed into two part, one is the trace of the regular subspace on F, which has only the non-local part and the other comes from the orthogonal complement of the regular subspace, which has only the local part. Actually the former one is a non-local Dirichlet form whereas the latter one has non-trivial local part. The remaining

information, i.e. the information of strongly local part of trace Dirichlet form of one-dimensional Brownian motion on F, is contained in the orthogonal complement of regular subspace corresponds to a time-changed Brownian motion after a darning transform.

Fisher-symmetric informationally complete measurements for pure states
李楠（中科院数学与系统科学研究院）

We introduce a new quantum measurement that is defined to be symmetric in the sense of uniform Fisher information across a set of parameters that injectively represent pure quantum states in the neighborhood of a fiducial state. The measurement is locally informationally complete—i.e., it uniquely determines these parameters, as opposed to distinguishing two arbitrary quantum states— and it is maximal in the sense of saturating tightenings of the multi-parameter quantum Cram´er-Rao bound. Requiring only local informational completeness allows us to reduce the number of outcomes of the measurement from 4d− 4, for the usual notion of global pure-state informational completeness, to 2d − 1.

Multipower variation from generalized difference for fractional integral processes
刘广应（浙江大学）

This paper presents limit theorems of the multipower variation based on a generalized difference for the fractional integral process $\int_0^tb_s ds+\int_0^t\sigma_s dB^H_s$, where $b=\{b_t, t\geq 0\}$ is a drift process, $B^H=\{B^H_t, t\geq 0\}$ is a fractional Brownian motion with Hurst parameter $H\in(0,1)$, and $\sigma=\{\sigma_t, t\geq 0\}$ is a process of finite $p-$variation, $p<1/(1-H)$. In particular, we obtain some large number laws and the associated central limit theorems. The limit theorems are applied to estimate Hurst parameter, and the consistence and asymptotic distribution of the estimators are also obtained. These results will provide some new statistical tools to analyze long memory effect in high-frequency situation.
Joint with Lixing Zhang (Zhejiang University).

Heavy-traffic asymptotics of a priority polling system with threshold service policy
Zaiming Liu , Yuqing Chu, Jinbiao Wu
刘再明（中南大学）

In this paper, by the singular-perturbation technique, we investigate the heavy-traffic behavior of a priority polling system with three queues under threshold policy. It turns out that the scaled queue-length of the critically loaded queue is exponentially distributed, independent of that of the stable queues, which possess the same distributions as a two-class priority queue with N-policy vacation. Further, we provide an approximation of the tail queue-length distribution of the stable queues, which shows that it has the same prefactors and decay rates as the classical two-class preemptive priority queue. Stochastic simulations

are taken to support the results.

A note on Constantin and Iyer's representation formula for the Navier--Stokes equations

罗德军（中科院数学与系统科学研究院）

The purpose of this note is to establish a probabilistic representation formula for Navier-Stokes equations on a compact Riemannian manifold. To this end, we first give a geometric interpretation of Constantin and Iyer's representation formula for the Navier-Stokes equation, then extend it to a compact Riemannian manifold. We shall use Elworthy-Le Jan-Li's idea to decompose de Rham-Hodge Laplacian operator on a manifold as a sum of the square of vector fields.

Algebraic stability of non-homogeneous regime-switching diffusion processes

邵井海（北京师范大学）

Some sufficient conditions on the algebraic stability of non-homogeneous diffusion processes and regime-switching diffusion processes are established. We focus on determining the decay rate of a stochastic system which switches randomly between different states, and owns different decay rates at various states. In particular, we show that if a two-state regime-switching diffusion process is p-th moment exponentially stable in one state and is p-th moment algebraically stable in another state, which are characterized by a common Lyapunov function, then this process is ultimately exponentially stable regardless of the jumping rate of the random switching between two states. Moreover, these results are useful in the stabilization of SDE by feedback control to reduce the observation times.

Leader-Follower Stochastic Differential Game with Asymmetric Information and Applications

史敬涛（山东大学）

In this talk, we will consider a leader-follower stochastic differential game with asymmetric information, where the information available to the follower is based on some sub-σ-algebra of that available to the leader. Such kind of game problem has wide applications in finance, economics and management engineering such as newsvendor problems, cooperative advertising and pricing problems. Stochastic maximum principles and verification theorems with partial information are obtained, to represent the Stackelberg equilibrium. As applications, a linear-quadratic leader-follower stochastic differential game with asymmetric information is studied. It is shown that the open-loop Stackelberg equilibrium admits a state feedback representation if some system of Riccati equations is solvable. (Joint work with Professor Guangchen Wang and Professor Jie Xiong.)

G-Expectation Weighted Sobolev Spaces, Backward SDE and Path Dependent PDE
宋永生（中科院数学与系统科学研究院）

We introduce a new notion of G-expectation-weighted Sobolev spaces,or in short, G-Sobolev spaces, and provide a 1-1 correspondence between a type of backward SDEs driven by G-Brownian motion and a type of path dependent PDEs in the corresponding G-Sobolev space.

Density functions of the Supremum of Wiener-Poisson Functionals
宋玉林（南京大学）

In this note, by using Bismut's approach to Malliavin calculus for jump processes, we obtained a criterion for the existence of density functions of Wiener-Poisson functionals. As an application, the existence of density functions for supremum of SDEs forced by Levy processes was proved. And the existence of density functions for perturbed SDEs with jumps was also obtained.

Smoothness of the joint density for spatially homogeneous SPDEs
孙晓斌（江苏师范大学）

In this paper we consider a general class of second order stochastic partial differential equations on $\mathbb{R}^d$ driven by a Gaussian noise which is white in time and has a homogenous spatial covariance. Using the techniques of Malliavin calculus we derive the smoothness of the density of the solution at a fixed number of points $(t, x_1), \dots, (t, x_n), t>0$, with some suitable regularity and non degeneracy assumptions. We also prove that the density is strictly positive in the interior of the support of the law. (This is a joint work with Yaozhong Hu, Jingyu Huang and David Nualart)

Fukushima type decomposition for semi-Dirichlet forms
王立飞（河北师范大学）

Let $({\cal E},D({\cal E}))$ be a semi-Dirichlet form satisfying some condition. we obtain the Fukushima type decomposition, which is a generation of the Fukushima' decomposition in the Dirichlet form setting. Precisely, a function $u\in {D(\mathcal{E})}_{loc}$ admits a Fukushima type decomposition if and only if it satisfies Condition (S), and the decomposition is unique. We also investigate the uniqueness of Doob-Meyer decomposition for semi-Martingales on interval type optional sets. At last, we give a transformation formula for martingale additional functionals based on the Fukushima type decomposition. This report is based on the paper *Fukushima type decomposition for semi-Dirichlet forms*, by professor Zhi-Ming Ma, professor Wei Sun and the reporter, which had been accepted by Tohoku

Mathematical Journal in August 2014.

On approximate continuity and the support of reflected stochastic differential equations
Jiagang Ren, Jing Wu
巫静（中山大学）

In this paper we prove an approximate continuity result for stochastic differential equations with normal reections in general domains, which together with the Wong-Zakai approximation result completes the support theorem for such diffusions in the uniform convergence topology. Also by adapting Millet and Sanz-Sol_e's idea, we characterize in Holder norm the support of diffusions reected in domains satisfying Lions-Sznitman's conditions by proving limit theorems of adapted interpolations. Finally we apply the support theorem to establish a boundary-interior maximum principle for subharmonic functions.

Several limit theorems under non-additive probability space
吴盼玉（山东大学）

In this talk, we first give the strong laws of large numbers for non-additive probabilities with the notion of independence for random variables under upper expectations. These results are natural extensions of the classical Kolmogorov’ s strong law of large numbers to the case where the probability is no longer additive. Then we give a general invariance principle of G-Brownian motion for the law of the iterated logarithm. In some sense, this result is an extension of the classical Strassen’ s invariance principle to the case where probability measure is no longer additive.

TBA
解永晓（山东师范大学）

Density convergence in the Breuer-Major theorem for Gaussian stationary sequences
徐方军（华东师范大学）

Consider a Gaussian stationary sequence with unit variance $X=\{X_k; k\in\N\cup\{0\}\}$. Assume that the central limit theorem holds for a weighted sum of the form $V_n=n^{-1/2}\sum^{n-1}_{k=0} f(X_k)$, where f designates a finite sum of Hermite polynomials. Then we prove that the uniform convergence of the density of V_{n} towards the standard Gaussian density also holds true, under a mild additional assumption involving the causal representation of X.

Superhedging with Ratio Constraint
许明宇（中科院数学与系统科学研究院）

We investigate the superhedging problem with the ratio constraints through the method of variational inequality. We show that the upper price or equivalently the seller's minimum price of any path-independent option can be expressed as the Black-Scholes price of an associated modified claim, which is consistent with the existing literatures. Using our theory, we also construct two counterexamples: the fixed strike arithmetic Asian option with constant constraints and the European call with time-variational onstraints. At last we present some approaches of this problem with BSDEs.

改良分支随机游动的离散型 Liouville quantum gravity 度量
章复熹（北京大学）

我们构造了一个特殊的高斯场--改良分支随机游动,在边长为 N 的方块 V_N 中每个点 u 赋一个零均值高斯随机变量 h(u)，然后对该高斯场考虑离散型 Liouville quantum gravity (LQG) 测度和度量，并证明按照 LQG 测度独立选取两个点，则两点间的 LQG 度量阶为 N 的 1+o(1) 次方.（与丁剑合作）

Weak solutions to SDEs driven by jump processes with irregular drift and H\"older regularity of their harmonic functions
赵国焕（北京大学）

Consider the following SDEs driven by pure jump processes with non-Lipschtiz drift: $$X_t^x=x+\int_0^tb(X_s)ds+Z_t.$$ in $\R^d$. We mainly study the weak solution. The noise in the above equation is ``supercritical''. For example, if Z_t is a rotational symmetric $\alpha-$stable process, its L\'evy characteristic is $|\xi|^\alpha$ with $\alpha<1$. For L\'evy process, under some technical assumptions on its L\'evy measure, we prove there exists a positive number ε_0, such that if $\lim_{\delta\rightarrow 0}\sup_{y\in B_\delta(x)}\frac{|b(x)-b(y)|}{|x-y|^{1-\alpha}}<\varepsilon_0$ and b is bounded, then the above SDE has a unique weak solution. The generator of X_t is $$\mathcal{L}^bu(x)=\int_{\R^d}[u(x+y)-u(x)]K(x,dy)+b(x)\cdot\nabla u(x).$$ We will prove even if the jumping kernel K is ``supercritical'' and irregular, b is just H\"older, the harmonic functions of X_t are H\"older continuous.

Market Excess Return, Variance and the Third Cumulants
赵慧敏（中山大学）

In this paper, we develop an equilibrium asset pricing model for market excess returns, variance and the third cumulant by using a jump-diffusion process with stochastic variance

and jump intensity in Cox, Ingersoll and Ross' (1985) production economy. Empirical evidence with the S&P 500 index and options from January 1996 to December 2005 strongly supports our model prediction that the lower the third cumulant, the higher the market excess returns. Consistent with existing literature, the theoretical mean-variance relation is supported only by regressions on risk-neutral variance. We further demonstrate empirically that the third cumulant explains significantly the variance risk premium.

大规模网络上的影响最大化问题研究
周川（中科院信息工程研究所）

影响最大化是目前网络科学研究的热点问题之一，它旨在寻找 k 个网络节点作为信息初始投放点，使得信息经过网络传播后的影响范围能够尽量大。影响最大化问题在独立级联模型和线性阈值模型下都是 NP-难问题。具有算法精度保证的贪婪算法效率低下，无法应对大规模的网络环境。为此，我们面向大规模网络上的影响最大化问题，从算法、数据和模型这三个层面出发，分别提出了（a）基于目标函数上界的剪枝式处理方法、（b）基于子图流的增量式处理方法和（c）基于网络粗化的映射式处理方法这三套求解方案。实验结果显示了所提方案在影响最大化问题的求解精度和效率上的优越性。

TBA
周德清（中央财经大学）

A Wong-Zakai theorem for Φ^4_3 model
朱蓉禅（北京理工大学）

We prove a version of the Wong-Zakai theorem for the dynamical Φ_3^4 model driven by space-time white noise on $\mathbb{T}^3$. Compared to the results in [Hai14] we consider the piecewise linear approximations to the space-time white noise and prove that the solutions to the model driven by the piecewise linear approximations converge to the solution to the Φ_3^4 model.

Lattice approximations to the dynamical Φ^4_3 model
朱湘禅（北京交通大学）

We study the lattice approximations to the dynamical Φ^4_3 model by paracontrolled distribution proposed in [GIP13]. We prove that the solutions to the lattice systems converge to the solution to the Φ_3^4 model in probability locally in time. In three spatial dimensions Φ_3^4 model, are not well defined in the classical sense. Renormalisation has to be performed in order to define the non-linear term. Formally, this renormalisation corresponds to adding an infinite mass term to the equation which leads to adding a drift term in the lattice systems.

中科院数学与系统科学研究院 “随机分析及其应用” 青年学者研讨会

(2015 年 12 月 17-20 日)

实 用 信 息

外地参会人员报到：2015 年 12 月 17 日，物科宾馆。
住宿：物科宾馆（在下页的地图上有标记）。

会议地点：中科院数学与系统科学研究院南楼（简称“数学院南楼”，并在下页的地图上有标记）。

每日会前注册：12 月 18 日 **08:20-08:40**，数学院南楼 **204 室**；
12 月 19 日 **08:20-08:30**，数学院南楼 **219 室**；
12 月 20 日 **08:20-08:30**，数学院南楼 **204 室**。

务请按时参加每天的会前注册，便于我们统计就餐人数。

住宿与会议地点均位于**海淀区北四环保福寺桥西南角**。具体交通线路如下：

- 北京首都国际机场：机场大巴中关村线，在“保福寺桥西站” 下。
- 北京南站： 地铁 4 号线，在“中关村站”**东北出口**换乘公交车，有众多线路可到“保福寺桥西站”。
- 北京西站： 地铁 9 号线，在“国家图书馆站”换乘地铁 4 号线，然后在“中关村站”**东北出口**换乘公交车，有众多线路可到“保福寺桥西站”。
- 北京站：地铁 2 号线，在“宣武门站”或“西直门站”换乘地铁 4 号线，然后在“中关村站”**东北出口**换乘公交车，有众多线路可到“保福寺桥西站”。
- 出租车：
  往物科宾馆：北四环 保福寺桥 西南角（中科院 物理所 / 数学所 物科宾馆）；
  往数学院南楼： 北四环 保福寺桥 西南角（中关村南路 / 中关村南一条 数学院南楼）。

联系人：宋永生 18600218610，夏建明 13621202322。


力学所
工程热物理所
机场巴士
保福寺桥
中关村二桥
中关村三桥
四环
展春二桥
学院桥
科苑宾馆
数学院思源楼
辽宁大厦
俏江南
中国银行
中科资源大厦
世纪科贸大厦
融科资讯中心
物理所
青年公寓
物科宾馆
中关村
中关村三小
科春社区
中关村一小
工商银行
新科祥园
搜狐媒体
文体中心
恒兴大厦
中关村南一条
国科大
数学院南楼
计算所
空间会议中心
科学时报
物理所新楼
中关村南路
北京市中关村医院
天创宾馆
骏马国际酒店
科学院南路
中关村东路
大运村路
北京航空航天大学
荣上居
中关村南四街
中关村南三街
自动化所
农业银行
星规路
西五道口
工商银行
希格玛大厦
卫星大厦
大泥湾路
银网中心
海淀黄庄
地铁-1-0-号线
知春里
知春路
翠宫饭店
豪景大厦
豪景佳苑
和盛大厦
好嫂子知春路店
碧兴园
盈都大厦
罗庄中路
中国标准化研究院
西土城
大运村公寓
首享科技大厦
知春嘉园
学院国际大厦
北京城市学院
展春园小区
银谷大厦
微薄之盐
柏彦大厦
北京航空航天大学
学院路
北京大
峨嵋轩
卫星
全景