



Brunn-Minkowski Theories: 80th Birthday of Erwin Lutwak

Conference Handbook

2026.6.1--2026.6.5
Shanghai University



Conference Information

Overview

The meeting honors Professor Erwin Lutwak on the occasion of his 80th birthday and celebrates his profound contributions to convex geometry. Bringing together leading experts and young researchers from around the world, the conference aims to provide a platform for exchanging new ideas, strengthening ties between geometry and analysis, and promoting collaboration across related fields.

Scientific Committee

- Monika Ludwig (Technische Universität Wien)
- Deane Yang (Courant Institute of Mathematical Sciences, New York University)
- Gaoyong Zhang (Courant Institute of Mathematical Sciences, New York University)

Organizing Committee

- Yong Huang (Hunan University)
- Aijun Li (Zhejiang University of Science and Technology)
- Jin Li (Shanghai University)
- Dongmeng Xi (Shanghai University)
- Ge Xiong (Tongji University)
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- Baocheng Zhu (Shaanxi Normal University)

Sponsor

National Natural Science Foundation of China (NSFC)

Contacts

Dongmeng Xi

Email:xi_dongmeng@shu.edu.cn

Jin Li

Email:jinlishu@shu.edu.cn

Invited Speakers

- Xiaxing Cai (Technische Universität Wien)
- Shibing Chen (University of Science and Technology of China)
- Jixiang Fu (Fudan University)
- Eugenia Saorín Gómez (Universität Bremen)
- Jinrong Hu (Technische Universität Wien)
- Yingxiang Hu (Beihang University)
- Jonas Knoerr (Technische Universität Wien)
- Jan Kotrbatý (Charles University)
- Cheng Lin (Tongji University)

- Youjiang Lin (Hebei Normal University)
- Yuanyuan Li (Westlake University)
- Alexander Litvak (University of Alberta)
- Dan Ma (Shanghai Normal University)
- Xiaonan Ma (Chern Institute of Mathematics, Nankai University)
- Xinan Ma (University of Science and Technology of China)
- Stephanie Mui (Georgia Institute of Technology)
- Lei Qin (Hunan University)
- Guohuan Qiu (Academy of Mathematics and Systems Science, CAS)
- Xianfeng Wang (Nankai University)
- Xudong Wang (Shaanxi Normal University)
- Yuchi Wu (East China Normal University)
- Chao Xia (Xiamen University)
- Ge Xiong (Tongji University)
- Vladyslav Yaskin (University of Alberta)
- Deping Ye (Memorial University of Newfoundland)
- Liping Yuan (Hebei Normal University)
- Ning Zhang (Huazhong University of Science and Technology)
- Weiping Zhang (Chern Institute of Mathematics, Nankai University)
- Yiming Zhao (Syracuse University)
- Bin Zhou (Peking University)
- Du Zou (Wuhan University of Science and Technology)

Schedule

May 31	Arrival & Registration
June 1-5	Academic Presentations
June 6	Departure

Accommodation & Registration Locations

Location 1: Lehu New Building, Shanghai University No. 716 Jinqiu Road, Baoshan District, Shanghai (上海大学乐乎新楼, 上海市宝山区锦秋路 716 号);

Location 2: Atour Hotel (Shangda Road, Shanghai University), Lane 69 Shangda Road, Dachang Town, Baoshan District (亚朵酒店, 上海市宝山区上大路 69 弄).

Schedule (June 1)

Venue: Lecture Room GA101, Shanghai University

Time	Title	Speakers	
9:00-9:20	Opening Ceremony	University Leadership Gaoyong Zhang Dongmeng Xi	

Time	Title	Speaker	Chair
9:20-10:00	The Lichnerowicz vanishing theorem revisited	Weiping Zhang	Gaoyong Zhang
10:00-10:30	Group photo and coffee break		
10:30-11:10	The Mahler conjecture in dimension three	Yuanyuan Li	Andrea Colesanti
11:15-11:55	Minkowski Problems Inspired by Lutwak-Yang-Zhang	Yiming Zhao	Xu-Jia Wang
11:55-14:30	Lunch		
14:30-15:10	Bergman kernels on non-compact manifolds and Poincaré series	Xiaonan Ma	Kefeng Liu
15:15-15:55	Anisotropic minimal/CMC hypersurfaces with free boundary	Chao Xia	Yong Huang
15:55-16:15	Coffee break		
16:15-16:55	Capillary Christoffel-Minkowski problem	Yingxiang Hu	Chuanqiang Chen
17:00-17:40	Topics in Suss conjecture	Ning Zhang	Vladyslav Yaskin
17:40-19:30	Banquet		

Schedule (June 2)

Venue: Lecture Room GA101, Shanghai University

Time	Title	Speaker	Chair
8:45-9:25	On the Critical LYZ Equation in Kähler Geometry	Jixiang Fu	Dongmeng Xi
9:30-10:10	On the Rurpert Property of convex bodies	Liping Yuan	Senlin Wu
10:10-10:30	Coffee break		
10:30-11:10	Sharp quantitative stability for the Minkowski first inequality via a quadratic estimate for the cone-volume measure	Ge Xiong	Chong Song
11:15-11:55	Inequalities for higher-rank mixed volumes	Jan Kotrbatý	Dongbin Li
11:55-14:30	Lunch		
14:30-15:10	When Projections Agree: A Geometric Thread or a Hidden Twist?	Eugenia Saorín Gómez	Andrea Colesanti
15:15-15:55	Geometric properties of solutions of Dirichlet p -Laplacian and related Brunn-Minkowski inequality	Lei Qin	Andrea Colesanti
15:55-16:15	Coffee break		
16:15-16:55	Uniqueness of isotropic curvature problems	Xianfeng Wang	Jian Lu
17:00-17:40	Existence and uniqueness of solutions to dual Minkowski type problems	Jinrong Hu	Chunna Zeng
17:40-19:30	Dinner		

Schedule (June 3)

Venue: Lecture Room GA101, Shanghai University

Time	Title	Speaker	Chair
8:45-9:25	On hyperbolic and functional analogues of questions of Grünbaum and Loewner	Vladyslav Yaskin	Alexander Litvak
9:30-10:10	Chord Sobolev inequalities	Xiaxing Cai	Alexander Litvak
10:10-10:30	Coffee break		
10:30-11:10	The Gaussian Minkowski Problem for Epigraphs of Convex Functions	Deping Ye	Yiming Zhao
11:15-11:55	Translation invariant area measures on convex bodies	Jonas Knoerr	Yiming Zhao
11:55-14:30	Lunch		
14:30-17:40	Free Discussion		
17:40-19:30	Dinner		

Schedule (June 4)

Venue: Lecture Room GA101, Shanghai University

Time	Title	Speaker	Chair
8:45-9:25	Some Liouville theorems for nonlinear elliptic partial differential equations	Xinan Ma	Shibing Chen
9:30-10:10	Variational Problems with Convex Constraints	Shibing Chen	Xinan Ma
10:10-10:30	Coffee break		
10:30-11:10	Orlicz affine isoperimetric inequalities for star bodies	Youjiang Lin	Aijun Li
11:15-11:55	Affine dual Minkowski problems	Yuchi Wu	Qingzhong Huang
11:55-14:30	Lunch		
14:30-15:10	Partial Legendre transform in Monge-Ampère type equations	Bin Zhou	Yuchi Wu
15:15-15:55	On log-concave isotropic random matrices	Stephanie Mui	Bin Zhou
15:55-16:15	Coffee break		
16:15-16:55	The ultimate shape of solution to the L_p Minkowski problem	Du Zou	Jin Li
17:00-17:40	Fisher information tensors as valuations	Dan Ma	Jin Li
17:40-19:30	Dinner		

Schedule (June 5)

Venue: Lecture Room GA101, Shanghai University

Time	Title	Speaker	Chair
8:45-9:25	On random diameters of convex bodies	Alexander Litvak	Vladyslav Yaskin
9:30-10:10	Gauss image problems for pseudo-cones and their associated spherical optimal transport	Xudong Wang	Vladyslav Yaskin
10:10-10:30	Coffee break		
10:30-11:10	Fixed and periodic points of the intersection body operators of lower orders	Cheng Lin	Dekai Zhang
11:15-11:55	Very weak solutions of the Dirichlet problem for 2-Hessian equation	Guohuan Qiu	Dekai Zhang
11:55-14:30	Lunch		
14:30-17:40	Free Discussion		

Abstracts

The Lichnerowicz vanishing theorem revisited

Weiping Zhang Chern Institute of Mathematics, Nankai University

The famous Lichnerowicz vanishing theorem states that if a closed spin manifold carries a metric of positive scalar curvature, then its Hirzebruch A-hat genus equals to zero. We will discuss some recent extensions of this classical result.

The Mahler conjecture in dimension three

Yuanyuan Li Westlake University

We settle the three-dimensional Mahler conjecture for arbitrary convex bodies. Prior to this work, the Mahler conjecture for arbitrary convex bodies had remained open in all dimensions $n \geq 3$ since Mahler's original work in 1938. More precisely, for every convex body $K \subset \mathbb{R}^3$, we prove the sharp inequality

$$|K| |K^{s(K)}| \geq \frac{64}{9},$$

where $K^{s(K)}$ denotes the polar of K with respect to Santaló point $s(K)$. The lower bound is attained by simplices; among polytopes, these are the only equality cases. The key ingredient in our proof is an admissible shadow-system framework, which produces face-lattice-preserving, volume-affine deformations and reduces the problem to a dimension count for the space of admissible speeds. As an application, this framework also yields a purely geometric new proof of the three-dimensional centrally symmetric Mahler inequality, first proved by Iriyeh and Shibata. This is joint work with Shibing Chen (USTC), Dongmeng Xi(SHU) and Zhe-Feng Xu(SISSA&USTC).

Minkowski Problems Inspired by Lutwak-Yang-Zhang

Yiming Zhao Syracuse University

A central theme in convex geometry is to understand how geometric invariants and measures determine, characterize, or distinguish convex bodies. Two closely related lines of research pursue this theme. Isoperimetric inequalities, including the classical isoperimetric inequality and the Brunn-Minkowski inequality, identify special convex bodies as extremals of geometric quantities. Minkowski problems, beginning with Minkowski's seminal work on prescribing surface area measure, ask when a convex body can be recovered from a prescribed geometric measure (including questions of existence, uniqueness, and regularity). Owing in large part (if not all) to the influential contributions of Lutwak-Yang-Zhang, the last three decades saw

far-reaching variants of the classical Minkowski problem, in which convex bodies are characterized by newly introduced geometric measures. In this talk, I will discuss some recent progress inspired by Lutwak-Yang-Zhang.

Bergman kernels on non-compact manifolds and Poincare series

Xiaonan Ma Chern Institute of Mathematics, Nankai University

We begin by reviewing our result concerning the estimation of the exponential decay of the Bergman kernel associated with the powers of a positive line bundle on complete Kähler manifolds, within the framework of bounded geometry. As an application, we show that if a discrete group Γ acts on such a variety and the quotient has finite volume, then, for sufficiently large powers of the positive line bundle, the Bergman kernel on the quotient space can be expressed as the sum, over $\gamma \in \Gamma$, of the contributions of the Bergman kernel on the total space. In particular, we highlight new examples of relative Poincaré series on domains of C^n and show that they do not vanish identically. This is a joint work with L. Ioos, W. Lu and G. Marinescu.

Anisotropic minimal/CMC hypersurfaces with free boundary

Chao Xia Xiamen University

In this talk, we study rigidity problems about anisotropic minimal/CMC hypersurfaces with free boundary. We talk about Bernstein-type and Liouville-type theorem for anisotropic minimal graphs with free boundary and Alexandrov-type theorem for compact anisotropic CMC hypersurfaces with free boundary in a half-space.

Capillary Christoffel-Minkowski problem

Yingxiang Hu Beihang University

The classical Minkowski problem asks for the existence and uniqueness of a convex body with prescribed Gauss curvature, while the family of Christoffel-Minkowski problems generalize this question to find convex bodies with prescribed elementary symmetric polynomial of the principal radii. The full resolution of the Minkowski problem was given by works of Minkowski, Aleksandrov, Pogorelov, Nirenberg, Cheng-Yau, while sufficient conditions for the resolution of the Christoffel-Minkowski problem were given by Guan-Ma and Sheng-Trudinger-Wang. In this talk, we discuss recent work with Mohammad Ivaki and Julian Scheuer, which gives an analogous set of sufficient conditions to solve the Christoffel-Minkowski problem in the class of capillary surfaces in a half spaces with angle less than 90 degrees.

Topics in Suss conjecture

Ning Zhang Huazhong University of Science and Technology

In this talk, we will give a partial solution to Suss conjecture, which asked whether the congruent transform in sections can determine the bodies. And we will also talk about the relation between Suss conjecture and Banach conjecture.

On the Critical LYZ Equation in Kähler Geometry

Jixiang Fu Fudan University

In Kähler geometry, the LYZ equation, also known as the deformed Hermitian-Yang-Mills equation, is a fully nonlinear elliptic partial differential equation that originates from mirror symmetry. In this talk, we present the existence of smooth solutions to the LYZ equation at the critical phase, thereby resolving a problem posed by Collins-Jacob-Yau and Y. Li. This is based on joint work with Professors Shing-Tung Yau and Dekai Zhang.

On the Rupert Property of convex bodies

Liping Yuan Hebei Normal University

We say that a convex body K satisfies the Rupert property if a hole can be made in K that is large enough to allow another copy of K to pass through it. This property traces back to a 17th-century observation by Prince Rupert of the Rhine concerning a cube, and has since been explored for various families of convex polytopes. In this talk, we will give an overview of related research developments.

Sharp quantitative stability for the Minkowski first inequality via a quadratic estimate for the cone-volume measure

Ge Xiong Tongji University

An optimal quadratic estimate for the cone-volume measure of a pair of antipodal points in $\mathbb{R}^n$ is obtained. As applications of this estimate, a strong Minkowski first inequality and therefore a strong Brunn-Minkowski inequality are established. This talk is based on the very recent work with Yu-De Liu and Kai-Wen Yang.

Inequalities for higher-rank mixed volumes

Jan Kotrbatý Charles University

In a previous joint work with Wannerer, we defined an array of numerical invariants for tuples of convex bodies in an n -dimensional vector space, called mixed volumes of rank $k = 1, \dots, n - 1$. For $k = 1$, this agrees with the usual mixed volume with some bodies reflected about the origin. The mixed volume of rank $n-1$, which is in some sense dual to the usual mixed volume, turns out to satisfy a quadratic Alexandrov-Fenchel-type inequality.

In this talk, we will present a conjecture that the mixed volume of general rank, when evaluated on tuples consisting of several copies of a single convex body, is maximized precisely by simplices. This subsumes the long-standing Godbersen's conjecture for $k = 1$ and refines (conjecturally) Schneider's generalization of Rogers-Shephard inequality for the k -th order difference body when $k > 1$. We will show that our conjecture holds within the class of anti-blocking convex bodies.

When Projections Agree: A Geometric Thread or a Hidden Twist?

Saorín Gómez, Eugenia Universität Bremen

The assumption of a common orthogonal projection plays a key role in refining classical inequalities within the Brunn-Minkowski theory. Motivated by early insights of Bonnesen, we revisit the fundamental observation that when two convex bodies K and L share a common projection onto a hyperplane, the Brunn-Minkowski inequality holds with exponent 1 rather than the standard $1/n$, and the Prékopa-Leindler inequality admits a refined version under the assumption that the involved functions share a common projection onto a hyperplane. In the L_p Brunn-Minkowski theory, partial results suggest that, under the additional assumption that convex bodies containing the origin have equal-volume projections onto a fixed hyperplane, certain positive results emerge - though a full extension will not hold. We also examine other instances where the assumption of equal projection plays a role, such as in the problem of extremal volume-to-surface-area ratios - where the optimal shape is not generally a cylinder- and in the matrix setting, where equal projections yield linear analogues of classical inequalities like Brunn-Minkowski.

Geometric properties of solutions of Dirichlet p -Laplacian and related Brunn-Minkowski inequality

Lei Qin Hunan University

It is well known that several variational functionals verify Brunn-Minkowski type inequalities, such as: Torsional rigidity; First Dirichlet eigenvalue of the Laplace; p -Capacity and so on. And their solutions of the corresponding boundary value problem (PDE's+boundary conditions), satisfy specific concavity properties. In this talk, I will present my recent work about the first Dirichlet eigenvalue problem to p -Laplace operator in Florence.

Uniqueness of isotropic curvature problems

Xianfeng Wang Nankai University

In this talk, we discuss several new uniqueness results concerning isotropic curvature problems, including the isotropic L_p dual Minkowski problem and the isotropic dual Orlicz-Minkowski problem. This is joint work with my students Jiachen Ding and Xinyu Li.

Existence and uniqueness of solutions to dual Minkowski type problems

Jinrong Hu Technische Universität Wien

As a natural counterpart to the Brunn-Minkowski theory, the dual Brunn-Minkowski theory was introduced by Lutwak in the mid-1970s. This theory gained substantial momentum following the groundbreaking work of Huang, Lutwak, Yang, and Zhang in 2016, who introduced a new family of fundamental geometric measures, termed dual curvature measures, which serve as duals to Federer's curvature measures. Their work also formulated the dual Minkowski problem, which concerns the prescribing of dual curvature measures, and resolved it within a variational framework. Since then, the dual Brunn-Minkowski theory has experienced rapid development, yielding a wide range of important results and applications. In light of this background, this talk will discuss recent progress on the existence and uniqueness of solutions to dual Minkowski type problems.

On hyperbolic and functional analogues of questions of Grünbaum and Loewner

Vladyslav Yaskin University of Alberta

Myroshnychenko, Tatarko, and Yaskin constructed a body K in $\mathbb{R}^n$, $n \geq 5$, with the property that there is exactly one hyperplane H passing through $c(K)$, the centroid of K , such that the centroid of $K \cap H$ coincides with $c(K)$. This construction provided answers to questions of Grünbaum and Loewner for $n \geq 5$, which are still open in dimensions 3 and 4. We study analogues of these questions in the settings of hyperbolic space $\mathbb{H}^n$ and s -concave functions on $\mathbb{R}^n$. Joint work with Y. Huang, S. Myroshnychenko, and K. Tatarko.

Chord Sobolev inequalities

Xiaxing Cai Technische Universität Wien

This work establishes a new family of sharp analytic inequalities. Together with the fractional Sobolev inequalities of Almgren and Lieb, they form a complete class of analytic inequalities, referred to as the chord Sobolev inequalities. A close connection between these inequalities and chord isoperimetric inequalities in integral geometry is established through a functional extension of chord power integrals. The limiting cases of the chord Sobolev inequalities are derived, one of which yields a logarithmic Sobolev-type inequality.

Combined with the work of Bourgain, Brezis, and Mironescu, these results complete the picture of the chord Sobolev inequalities, including their endpoint cases. This is joint work with Baeta.

The Gaussian Minkowski Problem for Epigraphs of Convex Functions

Deping Ye **Memorial University of Newfoundland**

The Gaussian Minkowski problem lies at the intersection of convex geometry and Gaussian analysis, with deep connections to variational methods and partial differential equations. While the classical theory focuses on convex bodies, many important objects in analysis are naturally unbounded, such as the epigraph of convex functions.

In this talk, I will discuss a Gaussian Minkowski problem for epigraphs of convex functions. Using infimal convolution, we derive a variational formula for the Gaussian volume of epigraphs and define associated Gaussian moment measures for convex functions. We then formulate the corresponding Minkowski problem and establish existence results under natural assumptions on the prescribed measure. It provides a natural framework that connects convex geometry, functional inequalities, and Monge–Ampère equations, leading to new geometric questions in the Gaussian setting.

Translation invariant area measures on convex bodies

Jonas Knoerr **Technische Universität Wien**

The classical area measure of a convex body and their relatives features prominently in many problems in convex geometry. As shown by Schneider, they can be characterized by a Hadwiger-type classification result for continuous measure-valued functionals on the space of convex bodies satisfying certain locality and equivariance conditions. In this talk, I will present work in progress on a more general classification result for such functionals. In particular, we will see that a suitable space of locally determined functionals on the space of convex bodies can be interpreted as the closure of mixed surface area measures with respect to a natural topology. As an application, we obtain Hadwiger-type characterization results for area measures that are equivariant with respect to suitable subgroup of the special orthogonal group.

Some Liouville theorems for nonlinear elliptic partial differential equations

Xinan Ma **University of Science and Technology of China**

We study the Liouville-type equation

$$\Delta^2 u - \lambda_1 \kappa \Delta u + \lambda_2 \kappa^2 (1 - e^{4u}) = 0$$

on a closed Riemannian manifold (M^4, g) with $\text{Ric} \geq 3\kappa g$ and $\kappa > 0$. Using the method of invariant tensors, we derive a differential identity to classify solutions within certain ranges of the parameters λ_1, λ_2 . A key step in our proof is a second-order derivative estimate, which is established via the continuity method. As an application of the classification results, we derive an Bechner type inequality on the 4-sphere and prove its rigidity. In recently we get the high dimension version. From the different face we get Liouville-type theorems for the equation $\Delta_K u - \lambda u + u^p = 0$ on (S^n, g_K) under different conditions for the support function h_K . Here Δ_K is the Hilbert-Brunn-Minkowski operator and g_K is the corresponding centro-affine metric. This is joint works with Liu yilu, Zhou xiao, Wu tian, Wu wangzhe.

Variational Problems with Convex Constraints

Shibing Chen University of Science and Technology of China

We study free boundary regularity in the monopolist's problem, a variational problem with a convexity constraint arising in economic mechanism design. In dimension two, we show that, under natural assumptions, the free boundary is locally a C^1 curve. The proof relies on a detailed analysis of the geometry of contact sets and the fine structure of affine regions of the minimizer. Based on joint work with Alessio Figalli and Yi Zhang.

Orlicz affine isoperimetric inequalities for star bodies

Youjiang Lin Hebei Normal University

The goal of this report is to extend the affine isoperimetric inequality and Steiner type inequality of Orlicz projection bodies (which originated to Lutwak-Yang-Zhang), from convex bodies to Lipschitz star bodies (whose radial functions are locally Lipschitz). In order to achieve it, we investigate the graph functions of the given Lipschitz star body K : Along almost all directions u , we can define the graph functions on an open dense subset of the orthogonal projection of K onto the orthogonal complement space of u .

Affine dual Minkowski problems

Yuchi Wu East China Normal University

In this talk, affine “invariant” measures derived from the dual affine quermassintegrals will be presented. Minkowski problems for the new affine-invariant measures will be proposed and studied. The new variation formula derived here leads to new affine operators that map star bodies to star bodies. An affine isoperimetric inequality is obtained for new bi-dual intersection bodies. This work is joint with Cai, Leng and Xi.

Partial Legendre transform in Monge-Ampere type equations

Bin Zhou Peking University

In this talk, I will report the recent progress on the applications of partial Legendre transform in the Monge-Ampère equation, linearized Monge-Ampère equation as well as Monge-Ampère type fourth order equations.

On log-concave isotropic random matrices

Stephanie Mui Georgia Institute of Technology

I will discuss some concentration inequalities on the largest and smallest singular values of jointly log-concave isotropic random matrices. In particular, we prove sharp lower tail estimates for the smallest singular value for such matrices in the cases of (1) entries being drawn from unconditional distributions, (2) independent columns, and (3) sufficiently tall dimensions. The proofs rely on the resolution of the slicing conjecture and related techniques. This is joint work with Manuel Fernandez, Galyna Livshyts, and Santosh Vempala.

The ultimate shape of solution to the L_p Minkowski problem

Du Zou Wuhan University of Science and Technology

The asymptotic behavior of solution to the L_p Minkowski problem initiated by Lutwak is considered. In particular, it is proved that as p tends to infinity, the solution to the L_p Minkowski problem converges in the Hausdorff metric to the Wulff shape of the data measure.

Fisher information tensors as valuations

Dan Ma Shanghai Normal University

A complete classification is established for continuous, $SL(n)$ contravariant, and translation invariant tensor valuations defined on the space of convex functions. When these valuations are further assumed to be homogeneous, the classification reveals that they are precisely the Fisher information tensors, which constitute a higher-order generalization of the Fisher information matrix.

On random diameters of convex bodies

Alexander Litvak University of Alberta

We provide upper and lower bounds on random diameters of high dimensional convex bodies. We apply our results to bound random diameters of p -ellipsoids (images of ℓ_p balls under diagonal operators) improving

previously known results and obtaining sharp bounds in many cases. This is a joint work with O.Guedon, K.Tatarko, and B.Vritsiou.

Gauss image problems for pseudo-cones and their associated spherical optimal transport

Xudong Wang Shaanxi Normal University

The Gauss image problem introduced by Böröczky, Lutwak, Yang, Zhang, and Zhao is one of the core issues in convex geometry, which is also closely connected with a class of spherical optimal transport problems. In this talk, we investigate some recent progress on the Gauss image problem for pseudo-cones that serve as the noncompact counterpart of convex bodies. By means of a new technique (termed the restrictive technique), we establish a necessary and sufficient condition for the existence of solutions to the general Orlicz-Gauss image problem for pseudo-cones, thereby strengthening the original result of Schneider up to a constant factor. Moreover, we further demonstrate its connection to spherical optimal transport. This work is joint with Siqi Lei.

Fixed and periodic points of the intersection body operators of lower orders

Cheng Lin Tongji University

For the intersection body operator of lower order $I_i K$ of a star body K in $\mathbb{R}^n$, $i \in \{1, 2, \dots, n-2\}$, we prove that $I_i^2 K = cK$ if and only if K is an origin-symmetric ball, and hence $I_i K = cK$ if and only if K is an origin-symmetric ball. As applications, we show that for the spherical Radon transform $\mathcal{R}$, a non-negative function $\rho \in L^\infty(S^{n-1})$ satisfies $\mathcal{R}(\rho^i) = c\rho$ for some $c > 0$ if and only if ρ is constant.

Very weak solutions of the Dirichlet problem for 2-Hessian equation.

Guohuan Qiu Academy of Mathematics and Systems Science, CAS

Weyl's lemma states that every weak solution of Laplace's equation is also a smooth solution. Although 2-Hessian equations have a similar double divergence structure, we find that there is no Weyl's lemma for 2-Hessian equations. For any α small, we construct infinitely many $C^{1,\alpha}$ very weak solutions to the 2-Hessian equation with prescribed boundary value. This is joint work with Tongtong Li.

List of Participants (Sorted by Last Name)

No.	Name	University / Affiliation
1	Xiaping Cai	Technische Universität Wien
2	Zixin Cao	Shaanxi Normal University
3	Chuanqiang Chen	Ningbo University
4	Fangwei Chen	Guizhou University of Finance and Economics
5	Feixiang Chen	Chongqing Sanxia University Of Science And Technology
6	Shibing Chen	University of Science and Technology of China
7	Xiaojuan Chen	Hunan University
8	Manli Cheng	Central China Normal University
9	Andrea Colesanti	Università degli Studi di Firenze
10	Qing Ding	Fudan University,Wenzhou University
11	Niufa Fang	Hunan University
12	Yibin Feng	Lanzhou University
13	Jixiang Fu	Fudan University
14	Yun Gao	York University
15	Yifan Gong	Shanghai University
16	Lujun Guo	Henan Normal University
17	Eugenia Saorín Gómez	Universität Bremen
18	Rigao He	Jiangxi University of Science and Technology
19	Han Hong	Beijing Jiaotong University
20	Jinrong Hu	Technische Universität Wien
21	Yingxiang Hu	Beihang University
22	Qingzhong Huang	Jiaying University
23	Yong Huang	Hunan University
24	Hailin Jin	Suzhou University of Science and Technology

No.	Name	University / Affiliation
25	Jonas Knoerr	Technische Universität Wien
26	Jan Kotrbatý	Charles University
27	Gangsong Leng	East China Normal University
28	Aijun Li	Zhejiang University of Science and Technology
29	Ben Li	Zhejiang Wanli University
30	Dongbin Li	Shaanxi Normal University
31	Hai Li	Xingyang Normal University
32	Jin Li	Shanghai University
33	Wan Li	Henan University Of Economics And Law
34	Xiao Li	Chongqing Normal University
35	Yanan Li	Hunan University
36	Yuanyuan Li	Westlake University
37	Yanlu Lian	Hangzhou Normal University
38	Cheng Lin	Tongji University
39	Youjiang Lin	Hebei Normal University
40	Alexander Litvak	University of Alberta
41	Kefeng Liu	Chongqing University of Technology
42	Weiru Liu	Central China Normal University
43	Yude Liu	Fudan University
44	Jian Lu	South China Normal University
45	Xinbao Lu	Tongji University
46	Songjun Lü	Suzhou University of Technology
47	Dan Ma	Shanghai Normal University
48	Xiaonan Ma	Chern Institute of Mathematics, Nankai University
49	Xinan Ma	University of Science and Technology of China
50	Xinyi Mao	Shanghai University

No.	Name	University / Affiliation
51	Xinfa Meng	Shanghai University & Syracuse University
52	Shuang Mou	Hubei Minzu University
53	Stephanie Mui	Georgia Institute of Technology
54	Xiaolin Pan	Shaanxi Normal University
55	Lei Qin	Hunan University
56	Guohuan Qiu	Academy of Mathematics and Systems Science, CAS
57	Xuyuan Ren	Shanghai University
58	Lin Si	Beijing Forestry University
59	Chong Song	Xiamen University
60	Mengwei Su	Tongji University
61	Qiang Sun	Fudan University
62	Shengyu Tang	Hunan University
63	Zhongwen Tang	Hebei Normal University
64	Jiangyan Tao	Zhejiang Normal University
65	Zixuan Tong	Shanghai University
66	Hejun Wang	Shandong Normal University
67	Sinan Wang	Hunan University
68	Tuo Wang	Shaanxi Normal University
69	Wei Wang	Hunan University of Science and Technology
70	Xianfeng Wang	Nankai University
71	Xiaoting Wang	Shaanxi Normal University
72	Xudong Wang	Shaanxi Normal University
73	Xu-Jia Wang	Westlake University
74	Boyi Wei	North University of China
75	Denghui Wu	Northwest A&F University
76	Guanzhou Wu	Shanghai University

No.	Name	University / Affiliation
77	Jiayong Wu	Shanghai University
78	Senlin Wu	North University of China
79	Yuchi Wu	East China Normal University
80	Dongmeng Xi	Shanghai University
81	Chao Xia	Xiamen University
82	Yunwei Xia	Southwest University
83	Kai Xin	Hunan University
84	Ge Xiong	Tongji University
85	Wenxue Xu	Southwest University
86	Fei Xue	Nanjing Normal University
87	Yan Yan	Shanghai University
88	Kaiwen Yang	Tongji University
89	Vladyslav Yaskin	University of Alberta
90	Deping Ye	Memorial University of Newfoundland
91	Wenqi Yi	Shanghai University
92	Renqing You	Shanghai University
93	Liping Yuan	Hebei Normal University
94	Chunna Zeng	Chongqing Normal University
95	Dekai Zhang	East China Normal University
96	Gaoyong Zhang	Courant Institute of Mathematical Sciences, New York University
97	Honglian Zhang	Shanghai University
98	Jiachang Zhang	Shaanxi Normal University
99	Jianyang Zhang	Shanghai University
100	Ning Zhang	Huazhong University of Science and Technology
101	Weiping Zhang	Chern Institute of Mathematics, Nankai University
102	Zengle Zhang	Chongqing University of Arts and Sciences

No.	Name	University / Affiliation
103	Yiming Zhao	Syracuse University
104	Luyi Zhi	North University of China
105	Bin Zhou	Peking University
106	Jiazuo Zhou	Guizhou Education University
107	Jinyu Zhou	Hunan University
108	Xia Zhou	Memorial University of Newfoundland
109	Xinyu Zhou	Tongji University
110	Yanping Zhou	China Three Gorges University
111	Baocheng Zhu	Shaanxi Normal University
112	Du Zou	Wuhan University of Science and Technology