



丘成桐数学科学中心
YAU MATHEMATICAL SCIENCES CENTER



2024奇点理论及其应用 TSIMF国际研讨会

International Symposium on Singularities
and Applications

2024-12-09 ~ 2024-12-13

Room A-110, TSIMF

SPEAKERS

Bingyi Chen, Liang Chen, Yifan Chen, Yifei Chen, Jinsan Cheng, Huhe Han, Hiroyuki Hayashi, Chuangqiang Hu, Shihoko Ishii, Goo Ishikawa, Stanislaw Janeczko, Miyuki Koiso, Junzhen Li, Yanlin Li, Guorui Ma, Fanning Meng, Graham Reeve, Agustin Romano-Velazquez, Kentaro Saji, Quan Shi, Siyong Tao, Yang Wang, Zida Xiao, Xun Yu, Beihui Yuan, Chunping Zhong

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About

2024 奇点理论及其应用 TSIMF 国际研讨会 International Symposium on Singularities and Applications

Date

2024-12-09 ~ 2024-12-13

Venue

Room A-110, TSIMF

Organizers

Stephen S.-T. Yau(丘成栋), Tsinghua University&Beijing Institute of Mathematical Sciences and Applications (BIMSA)

Stanislaw Janeczko, Warsaw University of Technology

Huaiqing Zuo(左怀青), Tsinghua University

Zhiwen Liu(刘志文), Beijing Institute of Mathematical Sciences and Applications (BIMSA)

Symposium Abstract

The purpose of this symposium is to bring together experts from various fields of singularity theory. These specialists' research areas will span from classical singularity theory to new branches of the exact and natural sciences, including mathematical modeling and its applications. We plan to invite keynote speakers who will showcase different aspects, primarily focusing on algebraic and analytic problems in singularity theory based on geometry. The discussions will center around singularity theory and related fields, including: singularities of smooth mappings and differential forms, subanalytic sets and semi-algebraic sets, Lipschitz stratifications, real algebraic singularities, Lagrangian and Legendrian singularities, asymptotic behavior of caustics and wavefronts, symplectic singularities, local invariants, symplectic singularities, contact and Poisson spaces, local algebras of singularities, resolutions of singularities, bifurcation of caustics and wavefronts, singular reduction, Hamiltonian systems and their generalizations, differential geometry of singularities, affine invariants of curves and surfaces, free divisors, torus actions, topology of singularities, and singularities of positive characteristic and singularities in algebraic geometry theory.

Description of the Aim

This symposium also aims to highlight the significance of mathematics in industrial and nanoscale sciences, particularly in nanomedicine. Mathematical and computational methods play a pivotal role in the theoretical understanding of nanomaterials. Both approaches provide effective theoretical and simulation tools for analyzing and interpreting experimental results, predicting the quantitative and qualitative behavior based on models, and controlling nanoscale systems. Mathematics also plays a crucial role in the interaction of these diverse disciplines, as they all rely on data, simulation, and visualization.

Schedule

December 9, 2024, Monday

Time&Date	Welcome to TSIMF
7:30-8:30	Breakfast
08:30-08:50	Registration
08:50-09:00	Opening: Stephen S.-T. Yau
Chair: Stanislaw Janeczko	
09:00-09:50	Goo Ishikawa Notes on singularities theory of mappings over dual numbers
09:50-10:20	Coffee Break
Chair: Huaqing Zuo	
10:20-11:10	Liang Chen Singular submanifolds in non-flat space from Legendrian dualities viewpoint
11:10-12:00	Yifan Chen On stringy invariant of \mathbb{Q} -Gorenstein varieties via \mathbb{Q} -embedded resolution
12:00-14:00	Lunch break
Chair: Chunping Zhong	
14:00-14:50	Bingyi Chen Effective bounds for singularities on Fano fibrations
14:50-15:20	Coffee Break
15:20-16:10	Yanlin Li The singularities and geometrics of evolutoids of non-lightlike surfaces in Minkowski 3-space
16:10-17:00	Guorui Ma Low-Dimensional Tori in Calogero-Moser Systems
17:30-	Dinner

December 10, 2024, Tuesday

Time&Date	Welcome to TSIMF
7:30-8:30	Breakfast
Chair: Stephen S.-T. Yau	
09:00-09:50	Ishii Shihoko Lifting of ideals in positive characteristic to those in characteristic 0
09:50-10:20	Coffee Break
Chair: Kentaro Saji	
10:20-11:10	Agustin Romano-Velazquez Reflexive modules on quotient surface singularities
11:10-12:00	Group Photo
12:00-14:00	Lunch break
Chair: Jianfei Wang	
14:00-14:50	Beihui Yuan Invariants of a hypersurface singularity by Waring decomposition
14:50-15:20	Coffee Break
15:20-16:10	Jinsan Cheng Singularities of the intersection of parametric surfaces and its applications
16:10-17:00	Huhe Han Approximation of spherical convex bodies of constant width
17:30-	Dinner

December 11, 2024, Wednesday

Time&Date	Welcome to TSIMF
7:30-8:30	Breakfast
Chair: Goo Ishikawa	
09:00-09:50	Miyuki Koiso Intrinsic singular points and curvatures of piecewise-smooth surfaces and their applications
09:50-10:20	Coffee Break
Chair: Xun Yu	
10:20-11:10	Chunping Zhong Schwarz lemma for Finsler metrics on the classical domains
11:10-12:00	Quan Shi Motivic Principal Value Integral for Hyperplane Arrangements
12:00-14:00	Lunch break
14:00-14:50	Free afternoon / Excursions
14:50-15:20	
15:20-16:10	
16:10-17:00	
18:00-20:00	Banquet

December 12, 2024, Thursday

Time&Date	Welcome to TSIMF
7:30-8:30	Breakfast
Chair: Miyuki Koiso	
09:00-09:50	Stanislaw Janeczko Singular points of generalized symplectic mappings
09:50-10:20	Coffee Break
Chair: Agustin Romano-Velazquez	
10:20-11:10	Xun Yu On automorphism groups of smooth hypersurfaces
11:10-12:00	Zida Xiao On the Nakai Conjecture for some singularities
12:00-14:00	Lunch break
Chair: Xiankui Meng	
14:00-14:50	Chuangqiang Hu On the k -th Tjurina number of weighted homogeneous singularities
14:50-15:20	Coffee Break
15:20-16:10	Fanning Meng On the Yau sequence over star-shaped dual resolution graph
16:10-17:00	Junzhen Li Geometry of Gluing Developable Surfaces
17:30-	Dinner

December 13, 2024, Friday

Time&Date	Welcome to TSIMF
7:30-8:30	Breakfast
Chair: Ishii Shihoko	
09:00-09:50	Kentaro Saji Normal form of the central singularities of D4-bifurcation of fronts and its applications
09:50-10:20	Coffee Break
Chair: Jinsan Cheng	
10:20-11:10	Yifei Chen Flops connecting minimal models
11:10-12:00	Hiroyuki Hayashi Geometry on curves passing through Whitney umbrella
12:00-14:00	Lunch break
Chair: Yifei Chen	
14:00-14:50	Siyong Tao Bernstein-Sato roots for weighted homogeneous singularities in positive characteristic
14:50-15:20	Coffee Break
15:20-16:10	Graham Reeve Circles of a Surface and their Centres
16:10-17:00	Yang Wang The weights of three types of isolated curve singularities are determined by Hodge ideals
17:30-	Dinner

Titles and Abstracts

December 9, 2024, Monday

Chair: Stanislaw Janeczko, Warsaw University of Technology

Notes on singularities theory of mappings over dual numbers

Goo Ishikawa(石川刚郎)

Hokkaido University

Two dimensional commutative and associative \mathbb{R} -algebras are classified into the complex numbers, the split complex numbers and the dual numbers, where the imaginary unit i satisfies $i^2 = -1$, $i^2 = 1$ or $i^2 = 0$ respectively. In this presentation, we explain differential calculus and singularity theory over dual numbers, for example, dual Morse lemma, dual transversality theorem, dual division theorem and dual preparation theorem.

Chair: Huaiqing Zuo(左怀青), Tsinghua University

Singular submanifolds in non-flat space from Legendrian dualities viewpoint

Liang Chen(陈亮)

Northeast Normal University

We investigate the geometrical and topological properties of singular submanifolds in non-flat space, such as singular curves in hyperbolic space, singular surfaces in sphere space and so on, from the viewpoint of Legendrian dualities which developed by Izumiya.

On stringy invariant of \mathbb{Q} -Gorenstein varieties via \mathbb{Q} -embedded resolution

Yifan Chen(陈亦凡)

Tsinghua University

The stringy E-function was introduced by Batyrev as a new invariant of singularity to study topological mirror symmetry and to prove a version of McKay correspondence. In this talk, We give a new method of computing the stringy E-function of \mathbb{Q} -Gorenstein variety via \mathbb{Q} -embedded resolution. As applications, we calculate the stringy E-function

of a hypersurface in \mathbb{C}^n defined by a semi-quasi-homogeneous polynomial.

Chair: Chunping Zhong(钟春平), Xiamen University

Effective bounds for singularities on Fano fibrations

Bingyi Chen(陈炳仪)
Sun Yat-sen University

Given a fibration, a natural and important question in birational geometry is to relate the singularities of the base space and those of the total space. Last year Birkar proved a conjecture of McKernan and Shokurov which says that, for all Fano fibrations from X to Z of given relative dimension, the minimal log discrepancy of singularities of Z is bounded from below by a positive number depending only on the minimal log discrepancy of X . In this talk, I will discuss the optimal bound in this result for the relative dimension one case and an effective bound for the toric case.

The singularities and geometrics of evolutoids of non-lightlike surfaces in Minkowski 3-space

Yanlin Li(李彦霖)
Hangzhou Normal University

In this talk, I will present the concept of evolutoids of non-lightlike surfaces as an envelope of a two-parameter family of lines in Minkowski 3-space. From the perspective of singularity theory, I will talk about the classification of singularities of evolutoids of non-lightlike surfaces in Minkowski 3-space. This is a joint work with Jing Li.

Low-Dimensional Tori in Calogero-Moser Systems

Guorui Ma(马国瑞)
Tsinghua University

In this talk, for the classical Calogero-Moser systems for $SU(n)$, we use action-angle variables to describe all degenerate Liouville tori of dimension $1 \leq k \leq n$. This is joint work with Andrii Lyashik, Nicolai Reshetikhin, Ivan Sechin. For the spin Calogero-Moser systems $SU(n)$ of rank 2, we also wish to give a description of the low-dimensional Liouville tori for some certain special cases, this is a unfinished work joint with Kai Jiang and Nicolai Reshetikhin.

December 10, 2024, Tuesday

Chair: Stephen S.-T. Yau(丘成栋), Tsinghua University & Beijing Institute of Mathematical Sciences and Applications (BIMSA)

Lifting of ideals in positive characteristic to those in characteristic 0

Shihoko Ishii(石井志保子)
The University of Tokyo

In the talk, I will show an appropriate lifting of an ideal plays the role of a bridge between the singularities in positive characteristic and those in characteristic zero.

Chair: Kentaro Saji(佐治健太郎), Kobe University

Reflexive modules on quotient surface singularities

Agustin Romano-Velazquez
Institute of Mathematics, UNAM

Let (X, x) be a normal surface singularity and denote by L its link. The first complete classification of the finite dimensional representations of the fundamental group of L was done by McKay in the case of rational double point singularities. Later, Artin and Verdier, reformulate the McKay correspondence in a more geometrical setting. Their correspondence gives a complete classification of the indecomposable reflexive modules. In the case of quotient surface singularities, Esnault classified all the reflexive modules of rank one. Moreover, Esnault proved that quotient surface singularities are the only surface singularities with a finite number of indecomposable reflexive modules, such singularities are called Cohen–Macaulay finite representation type.

In this talk, we classify all the reflexive modules on quotient surface singularities. For this, we will use the Atiyah–Patodi–Singer theorem and the theory of secondary characteristic classes to construct our classification. As a consequence, the classification problem of reflexive modules over surface singularities of Cohen–Macaulay finite representation type is completely finished.

Joint work with José Antonio Arciniega-Nevárez and José Luis Cisneros-Molina.

Chair: Jianfei Wang(王建飞), Huaqiao University

Invariants of a hypersurface singularity by Waring decomposition

Beihui Yuan(袁北慧)

Beijing Institute of Mathematical Sciences and Applications (BIMSA)

We consider analytic invariants of a hypersurface singularity given by the power sum decomposition of its tangent cone. Classification by the rank of Hessian matrices works for singularities with order 2. Our method can be viewed as a generalization of this method to the cases when the singularity has higher orders. Those invariants provide necessary conditions for contact equivalence.

Singularities of the intersection of parametric surfaces and its applications

Jinsan Cheng(程进三)

Academy of Mathematics and Systems Science, Chinese Academy of Sciences

We present a complete method to compute the topology of the intersection of two parametric surfaces. We analyze the singularities of the intersection in two spaces(the parametric space-4D and the model space-3D) and point out the relationship of the points between two spaces. Furthermore, we give a method to approximate the intersection for Computer-Aided Design.

Approximation of spherical convex bodies of constant width

Huhe Han(韩呼和)

Northwest A&F University

A theorem of Blaschke says that for every convex body of constant width τ in the Euclidean plane E^2 and every $\varepsilon > 0$ there exists a convex body of constant width τ whose boundary consists only of pieces of circles of radius τ such that the Hausdorff distance between the two bodies is at most ε . Lassak presented an analog of this theorem for bodies of constant width $\tau < \pi/2$ on the sphere \mathbb{S}^2 . In this talk, we show that (1) for any spherical convex body C of constant width $\tau > \pi/2$, there exists a sequence $\{C_i\}$ of convex bodies of constant width τ , whose boundaries consist only of arcs of circles of radius $\tau - \pi/2$ and great circle arcs such that $\lim_{i \rightarrow \infty} C_i = C$ with respect to the Hausdorff distance; (2) for any spherical convex body C of constant width $\pi/2$, there exists a sequence $\{P_i\}$ of spherical polytopes of constant width $\pi/2$ such that $\lim_{i \rightarrow \infty} P_i = C$ with respect to the Hausdorff distance;

December 11, 2024, Wednesday

Chair: Goo Ishikawa(石川刚郎), Hokkaido University

Intrinsic singular points and curvatures of piecewise-smooth surfaces and their applications

Miyuki Koiso(小磯深幸)
Kyushu University

We study piecewise-smooth (PS in short) surfaces in the three-dimensional Euclidean space, which are two-dimensional topological manifolds made by connecting finitely many smooth surfaces. We discuss intrinsic singular points of such surfaces and give new definitions which represent curvature and sharpness at each point in the 'edges' and at each 'vertex' of such a surface. These concepts are defined intrinsically by using a generalization of the classical Bertrand-Puiseux Theorem, which gives a power series expansion of the length of the geodesic circle with respect to the radius. Then, using the new concepts mentioned above, we represent the well-known Gauss-Bonnet Theorem that gives a relationship between curvatures and topology for surfaces. We discuss also the definition and characterization of PS developable surfaces which are isometric to 'planar surfaces'. And we mention a rigidity problem of such surfaces that is whether a PS closed developable surface can be isometrically-deformed preserving the enclosed volume.

Chair: Xun Yu(余讯), Tianjin University

Schwarz lemma for Finsler metrics on the classical domains

Chunping Zhong(钟春平)
Xiamen University

Around 1957-1958, K. H. Look studied the Schwarz lemma and analytic invariant on the classical domains of type I-IV with respect to the Bergman metrics. Recently we showed that each one of the classical domains of type I-IV (with rank greater than or equal two) admits infinitely many holomorphic invariant strongly pseudoconvex complex Finsler metrics which are all proved to be Kähler-Berwald metrics, but they are not necessary Hermitian quadratic. In this talk, we shall establish a Schwarz lemma for holomorphic invariant Kähler-Berwald metrics on the classical domains of type I-IV.

Motivic Principal Value Integral for Hyperplane Arrangements

Quan Shi(石泉)
Tsinghua University

Motivic Principal Value Integral (PVI) is defined for multivalued-rational forms on smooth complex varieties. It is the residue of the motivic zeta function and hence its vanishing and non-vanishing mean a lot. Denef, Jacobs, and Veys conjectured a geometrical vanishing implies the vanishing of PVI. In this talk, we shall give an introduction to PVI and provide our recent results about PVI for hyperplane arrangements. It is a joint work with Nero Budur and Huaqing Zuo.

December 12, 2024, Thursday

Chair: Miyuki Koiso(小磯深幸), Kyushu University

Singular points of generalized symplectic mappings

Stanislaw Janeczko
Warsaw University of Technology

Symplectic relations, or generalized symplectic mappings, are defined as the Lagrangian submanifolds of product symplectic manifold. Canonical stratification of the category of linear symplectic relations is constructed and applied to searching the special vertical points (singular points) of general symplectic relations.

The theorem on invariant decomposition of linear symplectic relations onto canonical reductions and symplectomorphisms is presented. Extension of the action of symplectic mappings is used to investigation of billard map closed trajectories and cohomological invariant of the discrete dynamical systems.

Chair: Agustin Romano-Velazquez, Institute of Mathematics, UNAM

On automorphism groups of smooth hypersurfaces

Xun Yu(余讯)
Tianjin University

We show that smooth hypersurfaces in complex projective spaces with automorphism groups of maximum size are isomorphic to Fermat hypersurfaces, with a few (explicitly given) exceptions. This is a joint work with Song Yang and Zigang Zhu.

On the Nakai Conjecture for some singularities

Zida Xiao(肖子达)

Tsinghua University

The well-known Nakai Conjecture concerns a very natural question: For an algebraic variety, how does the differential operators of its coordinate ring imply the smoothness of it? It has been shown that all higher derivations of a smooth complex variety can be generated by the first order derivations, and Nakai proposed the converse question: if the algebra of differential operators is generated by the first order derivations, is the variety smooth? In this talk, I will introduce the history and present our work on the cases of isolated homogeneous hypersurface singularities and small modality hypersurface singularities.

Chair: Xiankui Meng(孟宪奎), Beijing University of Posts and Telecommunications

On the k-th Tjurina number of weighted homogeneous singularities

Chuangqiang Hu(胡创强)

Beijing Institute of Mathematical Sciences and Applications (BIMSA)

Let $(X, 0)$ denote an isolated singularity defined by a weighted homogeneous polynomial f . Let \mathcal{O} be the local algebra of all holomorphic function germs at the origin with the maximal ideal m . We study the k -th Tjurina algebra, defined by $A_k(f) := \mathcal{O} / \langle f, mJ(f) \rangle$, where $J(f)$ denotes the Jacobi ideal of \mathcal{O} . The zeroth Tjurina algebra is well known to represent the tangent space of the base space of the semi-universal deformation of $(X, 0)$. Motivated by this observation, we explore the deformation of $(X, 0)$ with respect to a fixed k -residue point. We show that the tangent space of the corresponding deformation functor is a subspace of the k -th Tjurina algebra. Explicitly calculating the k -th Tjurina numbers, which correspond to the dimensions of the Tjurina algebra, plays a crucial role in understanding these deformations. According to the results of Milnor and Orlik, the zeroth Tjurina number can be expressed explicitly in terms of the weights of the variables in f . However, we observe that for values of k exceeding the multiplicity of X , the k -th Tjurina number becomes more intricate and is not solely determined by the weights of variables. In this paper, we introduce a novel complex derived from the classical Koszul complex and obtain a computable formula for the k -th Tjurina numbers for all $k \geq 0$. As applications, we calculate the k -th Tjurina numbers for all weighted homogeneous singularities in three variables. This is a joint work with Stephen S.-T. Yau and Huaqing Zuo.

On the Yau sequence over star-shaped dual resolution graph

Fanning Meng(孟凡宁)
Guangzhou University

In this paper, we study the Yau sequence concerning the minimal cycle over star-shaped dual resolution graph, and consider the relations between the minimal cycle A and the fundamental cycle Z . Further, we also give the coincidence between the canonical cycles and the fundamental cycles from the Yau sequence concerning the minimal cycle.

Geometry of Gluing Developable Surfaces

Junzhen Li(李俊臻)
Kobe University

In this talk, it will be presented that the developable surface obtained from the frame defined by the unit vectors along the gluing curve where two surfaces are glued and provides the conditions for this developable surface to be in the special case.

December 13, 2024, Friday

Chair: Shihoko Ishii(石井志保子), The University of Tokyo

Normal form of the central singularities of D4-bifurcation of fronts and its applications

Kentaro Saji(佐治健太郎)
Kobe University

A form representing a singular point is an $SO(3)$ -normal form if it covers the A-equivalent class of the singular point by a coordinate change on the source space and an isometry on the target space.

In this talk, $SO(3)$ -normal forms of the D4-singularities of fronts in the three space will be presented.

As an application, local and global differential geometric properties of the D4-singularities will be presented.

Chair: Jinsan Cheng(程进三), Academy of Mathematics and Systems Science, Chinese Academy of Sciences

Flops connecting minimal models

Yifei Chen(陈亦飞)

Institute of Mathematics, Chinese Academy of Sciences

Minimal models are one of outcomes of Minimal Model Program (MMP). When running MMP, minimal models are not unique. It is natural to ask that what are the relations among these minimal models? It is known that flops connect these minimal models. We shall show that any two minimal models of lc algebraically integrable foliated triples on \mathbb{Q} -factorial klt varieties are connected by a sequence of flops. This is a joint work with Jihao Liu and Yanze Wang.

Geometry on curves passing through Whitney umbrella

Hiroyuki Hayashi(林弘幸)

Kobe university

Whitney umbrella is a singularity which appears most frequently on surfaces. To study differential geometry on a surface, a unit normal vector plays a central role. However, a unit normal vector on Whitney umbrella is not extended. In this talk, we show that we can extend a unit normal vector beyond a Whitney umbrella if we consider a curve passing through Whitney umbrella. Then a study of geometry by using invariants defined by a Darboux frame consisting of smoothly defined unit normal and tangent vectors along a curve passing through Whitney umbrella will be presented. Geometric meanings of the invariants will also be presented.

Chair: Yifei Chen(陈亦飞), Institute of Mathematics, Chinese Academy of Sciences

Bernstein-Sato roots for weighted homogeneous singularities in positive characteristic

Siyong Tao(陶斯咏)

Tsinghua University

We prove that in regular F -finite rings of positive characteristic, the Bernstein-Sato root set of the tensor product of ideals is the union of their respective Bernstein-Sato root sets. Moreover, by computing some special F -thresholds, we provide an explicit description about the Bernstein-Sato roots of a weighted homogeneous polynomial with an isolated singularity at the origin in positive characteristic.

Circles of a Surface and their Centres

Graham Reeve

Liverpool Hope University

It has long been known that we can use the contact between a surface and so called 'model submanifolds' to tell us about the underlying geometry of a curve or a surface. For example, we can tell something about how flat a surface is by its contact with either planes or lines, and something about how round it is by its contact with spheres or circles. In this talk I'll revisit the idea of contact between a surface and circles and discuss the idea of a "surface of centres" of circles with sufficiently high contact, a kind of generalisation to the focal set.

The weights of three types of isolated curve singularities are determined by Hodge ideals

Yang Wang (汪洋)

Tsinghua University

We calculate Hodge ideals and Hodge moduli algebras for three types of isolated quasi-homogeneous curve singularities. We show that Hodge ideals and Hodge moduli algebras of the singularities can determine the weights of the polynomials defining these singularities.

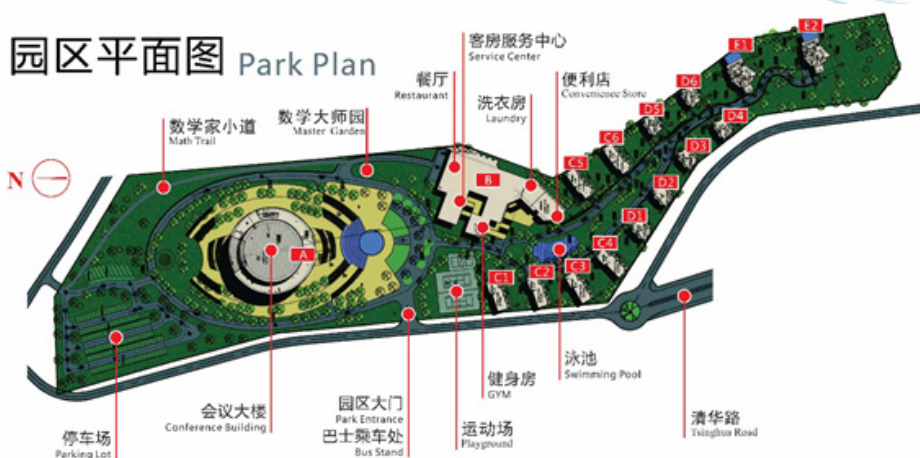
We give some examples to explain why Hodge moduli algebras and Hodge moduli sequence are better invariants than characteristic polynomial (a topological invariant of the singularity) for non-degenerate quasi-homogeneous singularities, in the sense that characteristic polynomial cannot determine the weight type of the singularity. Furthermore, from the observation of some examples, we raise a conjecture that the Hodge moduli numbers of isolated quasi-homogeneous hypersurface singularities remain constant under semi-quasi homogeneous deformation.



The facilities of TSIMF are built on a 23-acre land surrounded by pristine environment at Phoenix Hill of Phoenix Township. The total square footage of all the facilities is over 29,000 square meter that includes state-of-the-art conference facilities (over 10,000 square meter) to hold many international workshops simultaneously, two reading rooms of library, a guest house (over 10,000 square meter) and the associated catering facilities, a large swimming pool, gym and sports court and other recreational facilities.

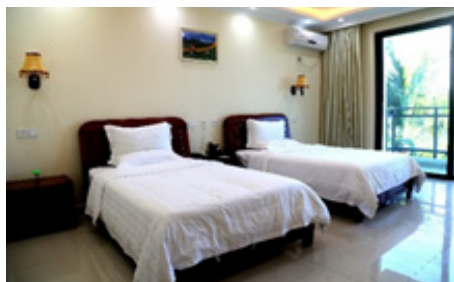
Management Center of Tsinghua Sanya International Forum is responsible for the construction, operation, management and service of TSIMF. The mission of TSIMF is to become a base for scientific innovations, and for nurturing of innovative human resource; through the interaction between leading mathematicians and core research groups in pure mathematics, applied mathematics, statistics, theoretical physics, applied physics, theoretical biology and other relating disciplines, TSIMF will provide a platform for exploring new directions, developing new methods, nurturing mathematical talents, and working to raise the level of mathematical research in China.

About Facilities



Registration

Conference booklets, room keys and name badges for all participants will be distributed at the front desk. Please take good care of your name badge. It is also your meal card and entrance ticket for all events.



Family rooms are also equipped with kitchen and refrigerator.

Guest Room

All the rooms are equipped with: free Wi-Fi (Password:tsimf123), TV, air conditioning and other utilities.



Library



Opening Hours: 09:00am-22:00pm

TSIMF library is available during the conference and can be accessed by using your room card. There is no need to sign out books but we ask that you kindly return any borrowed books to the book cart in library before your departure.



In order to give readers a better understanding of the contributions made by the Fields Medalists, the library of Tsinghua Sanya International Mathematics Forum (TSIMF) instituted the Special Collection of Fields Medalists as permanent collection of the library to serve the mathematical researchers and readers.

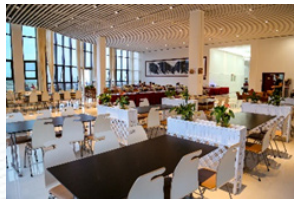
So far, there are 271 books from 49 authors in the Special Collection of Fields Medalists of TSIMF library. They are on display in room A220. The participants are welcome to visit.

Restaurant

All the meals are provided in the restaurant (Building B1) according to the time schedule.



Breakfast 07:30-08:45
Lunch 12:00-13:30
Dinner 17:30-19:00



Laundry

Opening Hours: 24 hours

The self-service laundry room is located in the Building(B1).



Gym

Opening Hours: 24 hours

The gym is located in the Building 1 (B1), opposite to the reception hall. The gym provides various fitness equipment, as well as pool tables, tennis tables etc.



Playground

Playground is located on the east of the central gate. There you can play basketball, tennis and badminton. Meanwhile, you can borrow table tennis, basketball, tennis balls and badminton at the reception desk.

Swimming Pool

Please note that there are no lifeguards. We will not be responsible for any accidents or injuries. In case of any injury or any other emergency, please call the reception hall at +86-898-38882828.



Free Shuttle Bus Service at TSIMF

We provide free shuttle bus for participants and you are always welcome to take our shuttle bus, all you need to do is wave your hands to stop the bus.

Destinations: Conference Building, Reception Room, Restaurant, Swimming Pool, Hotel etc.



Contact Information of Administration Staff

Location of Conference Affairs Office: Room 104, Building A

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*Reception duty hours: 7:00-23:00, chamber service please call: 0086-38882828 (exterior line) 80000 (internal line)

*Room maintainer night duty hours: 23:00-7:00, if you need maintenance services, please call: 0086-38263909 (exterior line) 30162 (internal line)

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清华大学三亚国际论坛管理中心 | 三亚清华数学论坛管理中心
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