第十届图论与组合优化前沿研讨会

会议日程

9月30日	**全天**	**会议注册，地点：汇高酒店一楼大堂**
18:00-20:30	**晚餐（汇高一楼中餐厅）**	

10月1日	**上午**	**主会场（组合中心四楼报告厅）**
8:30-8:40	**开幕式**	
主持人	**李雨生**	
8:40-9:30	李才恒	Homogenous graphs
9:30-10:00	合影（楼下小花园）、茶歇（301教室、109教室）	
主持人	**冯荣权**	
10:00-10:50	李国君	三代测序数据足以完美重构人类基因组
10:50-11:40	胡智全	Erdős-Gyárfás Conjecture for P_{10}-free graphs
12:00-13:00	**午餐（汇高一楼中餐厅）**	
10月1日	**下午**	**会场一（四楼报告厅）**
主持人	**康丽英**	
14:00-14:30	苗连英	A counterexample to a conjecture about triangle-free induced subgraphs of graphs with large chromatic number and small clique number
14:30-15:00	侯新民	On induced subgraph of Cartesian product of paths or cycles
15:00-15:30	宝音都仍	Decomposition of graphs
15:30-16:00	茶歇（301教室）	
主持人	**李靖建**	
16:00-16:30	陈　敏	A new forest partition of planar graphs with girth 5

16:30-17:00	张　霞	Polychromatic edge-colorings of subgraphs of balanced complete bipartite graphs and beyond
17:00-17:30	白延东	Disjoint cycles of different lengths in tournaments
10月1日	**下午**	**会场二（112教室）**
主持人	**侯耀平**	
14:00-14:30	高锁刚	D-magic labelings of distance-regular graphs
14:30-15:00	王　卫	A structure theorem for the restricted sum of four squares
15:00-15:30	王力工	An improvement of sufficient condition for k-leaf-connected graphs
15:30-16:00	茶歇（109教室）	
主持人	**冯立华**	
16:00-16:30	周进鑫	Symmetry in graphs
16:30-17:00	陈仪朝	New bounds for the average genus and average number of faces of a simple graph
17:00-17:30	吴耀琨	多个非负方阵的动力学
18:30-20:00	**晚宴（汇高四楼花园厅）**	

10月2日	**上午**	**会场一（四楼报告厅）**
主持人	**苗正科**	
8:30-9:00	熊黎明	Forbidden pair for even factor in supereulerian graphs
9:00-9:30	李斌龙	Forbidden pairs of disconnected graphs for supereulerianity of connected graphs
9：30-10:00	刘文忠	Even cycle decompositions of Eulerian graphs
10:00-10:20	茶歇（301教室）	
主持人	**张胜贵**	
10:20-10:50	李书超	Vertex cut, eigenvalues, [a, b]-factors and toughness of connected bipartite graphs

10:50-11:20	李红海	Polynomials of hypergraphs
11:20-11:50	张　欣	Crossing number of graphs with low local crossing number
10月2日	**上午**	**会场二（112教室）**
主持人	**侯建锋**	
8:30-9:00	周　波	On the distribution of Laplacian eigenvalues
9:00-9:30	韩　杰	Transversal structures in graphs and hypergraphs
9:30-10:00	袁龙图	Supersaturation beyond edge-critical graphs
10:00-10:20	茶歇（109教室）	
主持人	**鲁红亮**	
10:20-10:50	龚世才	On bipartite graphs having minimal fourth adjacency coefficient
10:50-11:20	林启忠	On a conjecture of Conlon, Fox and Wigderson
11:20-11:50	王文环	Extremal spectral results of planar graphs without $C_{l,l}$ or Theta graph
12:00-13:00	**午餐（汇高一楼中餐厅）**	
10月2日	**下午**	**会场一（四楼报告厅）**
主持人	**常　安**	
14:00-14:30	金贤安	On the maximum local mean order of sub-k-trees of a k-tree
14:30-15:00	王广富	l_1-embeddability of shifted quadrilateral cylinder graphs
15:00-15:30	何伟骅	Learn to solve dominating set problem with graph neural networks
15:30-16:00	茶歇（301教室）	
主持人	**杨卫华**	
16:00-16:30	许克祥	On the number of subgraphs in a graph
16:30-17:00	孙丽珠	Estrada index of hypergraphs via eigenvalues of tensors

17:00-17:30	王书晶	On Seymour’s and Sullivan’s second neighbourhood conjectures
10月2日	**下午**	**会场二（112教室）**
主持人	**杨玉军**	
14:00-14:30	祝宝宣	Log-concavity of sequences from total positivity
14:30-15:00	刘清海	Highly connected triples and Mader's conjecture
15:00-15:30	冯　星	Minimal bricks with the maximum number of edges
15:30-16:00	茶歇（109教室）	
主持人	**王秀梅**	
16:00-16:30	亓兴勤	图论及优化算法在图数据挖掘中的应用
16:30-17:00	兰静芬	A characterization of extremal non-transmission-regular graphs by the distance (signless Laplacian) index and maximum transmission
17:00-17:30	孙跃方	Arc-disjoint strong subgraphs containing given vertices
17:30-18:00	付　凤	The chromatic entropy of linear supertrees and its application
18:30-20:00	**晚餐（汇高一楼中餐厅）**	

10月3日	**上午**	**主会场(组合中心四楼报告厅)**
主持人	**李乔良**	
8:30-9:00	晏卫根	On the polynomial reconstruction of graphs and digraphs
9:00-9:30	苑立平	On poidge-convexity
9：30-10:00	崔　庆	Domination, k-independence and k-independent domination in trees
10:00-10:20	茶歇（301教室）	
主持人	**田应智**	
10:20-10:50	黄泽军	Cliques and independent sets of the Birkhoff polytope graph

10:50-11:20	吕本建	The structure of maximal cross t-intersecting families with given covering numbers
11:20-11:50	周　江	Oriented spanning trees and stationary distribution of digraphs
12:00-13:00	**午餐（汇高一楼中餐厅）**	
10月3日	**下午**	**主会场（四楼报告厅）**
主持人	**郝荣霞**	
14:00-14:30	王建锋	On the connnected graphs with two positive eigenvalues
14:30-15:00	金利刚	(I, F)-partition of planar graphs without cycles of length 4, 6, or 9
15:00-15:30	计省进	The saturation number of spanning trees with at most three leaves
15:30-16:00	茶歇（301教室）	
主持人	**陈海燕**	
16:00-16:30	李峰伟	Polynomial algorithms for computing the isolated toughness of interval and split graphs
16:30-17:00	娄贞贞	Spectral radius of graphs with given size and odd girth
17:00-17:30	谢轶康	On eulerian subgraphs and hamiltonian line graph
18:30-20:00	**晚餐（汇高一楼中餐厅）**	

Disjoint cycles of different lengths in tournaments

白延东 (Yandong Bai)

Northwestern Polytechnical University

Abstract

Cycles are amongst the most fundamental graph objects and have been the focus of extensive study in graph theory. The class of tournaments is an important class of directed graphs. In this talk, we introduce some long-standing conjectures on cycles in directed graphs, together with our recent results concerning on disjoint cycles of different lengths in tournaments.

Decomposition of graphs

宝音都仍 (Baoyindureng Wu)

Xinjiang University

Abstract

In this talk, I will report some recent results on decomposition of graph with constraint on maximum or minimum degree.

A new forest partition of planar graphs with girth 5

陈敏 (Min Chen)

Zhejiang Normal University

Abstract

Given a graph $G = (V, E)$, if its vertex set $V(G)$ can be partitioned into two non-empty subsets V_1 and V_2 such that $\Delta(G[V_1]) \leq d_1$ and $\Delta(G[V_2]) \leq d_2$, then we say that G admits a $(\Delta_{d_1}, \Delta_{d_2})$-partition. If $G[V_1]$ and $G[V_2]$ are both forests with maximum degree at most d_1 and d_2, respectively, then we further say that G admits an (F_{d_1}, F_{d_2})-partition.

Let $\mathcal{G}_g$ denote the class of planar graphs with girth at least g. It is known that every graph in $\mathcal{G}_5$ admits a (Δ_2, Δ_6)-partition. In this talk, we shall strengthen this result by proving that every graph in $\mathcal{G}_5$ admits an (F_2, F_6)-partition. This is joint work with André Raspaud, Weifan Wang and Weiqiang Yu.

New bounds for the average genus and average number of faces of a simple graph

陈仪朝 (Yichao Chen)

Suzhou University of Science and Technology

Abstract

Let G be a connected simple graph with minimum degree larger than 1. Let $v(G), e(G)$ denote the number of vertices and edges of G, respectively. We show that the average genus of G is no less than $\frac{v(G)-v_2(G)-e(G)+3}{6}$, where $v_2(G)$ is the number of vertices of degree 2 in G. This improves a lower bound of Chen, Gross and Rieper. Recently Loth and Mohar conjectured that the average number of faces of a connected simple graph is less than or equal to $v(G)/3+1$. Our result implies that this conjecture holds for connected simple graphs with average degree at most 3. (with Zhicheng Gao)

Domination, k-independence and k-independent domination in trees

崔庆 (Qing Cui)

Nanjing University of Aeronautics and Astronautics

Abstract

A subset D of vertices in a graph G is a dominating set of G if every vertex in $V(G) \setminus D$ has at least one neighbor in D. The domination number of G is the minimum cardinality of a dominating set of G. A subset S of vertices in G is a k-independent set of G if $\Delta(G[S]) < k$. The k-independence number of G is the maximum cardinality of a k-independent set of G. A subset I of vertices in G is a k-independent dominating set of G if I is both k-independent and dominating. The k-independent domination number of G is the minimum cardinality of a k-independent domination set of G. In this talk, we consider two relations among the domination number, k-independence number and k-independent domination number in trees, which generalize a result of Dehgardi et al. and two results of Zhang and Wu.

Minimal bricks with the maximum number of edges

冯星 (Xing Feng)

Jimei University

Abstract

A 3-connected graph is a *brick* if, after the removal of any two distinct vertices, the resulting graph has a perfect matching. A brick is *minimal* if, for every edge e, deleting e results in a graph that is not a brick. Norine and Thomas (Minimal bricks, J. Combin. Theory, Ser. B, 96(2006), 505-513) proved that every minimal brick with $2n$ vertices, which is distinct from the prism or the wheel on four, six or eight vertices, has at most $5n - 7$ edges. This talk contains a characterization of the extremal minimal bricks with $2n$ vertices that meet this upper bound. This is a joint work with Weigen Yan.

The chromatic entropy of linear supertrees and its application

付凤 (Feng Fu)

Qinghai Normal University

Abstract

It is well known that Shannon entropy plays an important role in the field of information theory. Subsequently, a variety of graph entropies were proposed by researchers and found that there are many applications in physical chemistry, medicine, biology and so on. In this work, we mainly study the chromatic entropy based on the vertex strong coloring of a linear p-uniform supertree, including their maximal and minimal values. Moreover, in order to research the generalization of dendrimers, a new class of p-uniform supertrees, called hyper-dendrimers, are proposed. In particular, the results on the extremal values of chromatic entropy for supertrees are applied to explore the behaviors of hyper-dendrimers.

D-magic labelings of distance-regular graphs

高锁刚 (Suogang Gao)

Hebei Normal University

Abstract

Let G be a finite undirected simple connected graph with vertex set $V(G)$, distance function ∂ and diameter d. Let $D \subseteq \{0, 1, \ldots, d\}$ be a set of distances. A bijection $l : V(G) \to \{1, 2, \ldots, |V(G)|\}$ is called a D-magic labeling of G if there exists a constant k such that $\sum_{x \in N_D(v)} l(x) = k$ for any vertex $v \in V(G)$, where $N_D(v) = \{x \in V(G) : \partial(x, v) \in D\}$. We say G has a D-magic labeling if G admits a D-magic labeling. In this talk, we give the necessary and suffieient conditions for the folded n-cube and the halved folded n-cube to have a $\{1\}$-magic labeling and a $\{0, 1\}$-magic labeling, respectively.

This is a joint work with Yi Tian, Na kang, Bo Hou, Lihang Hou, Weili Wu and Dingzhu Du.

On bipartite graphs having minimal fourth adjacency coefficient

龚世才 (Shicai Gong)

Zhejiang University of Science and Technology

Abstract

Let G be a simple graph with order n and adjacency matrix $\mathbf{A}(G)$. The characteristic polynomial of G is defined by $\phi(G; \lambda) = \det(\lambda I - \mathbf{A}(G)) = \sum_{i=0}^{n} \mathbf{a}_i(G)\lambda^{n-i}$, where $\mathbf{a}_i(G)$ is called the i-th adjacency coefficient of G. Denote by $\mathfrak{B}_{n,m}$ the collection of all connected graphs having n vertices and m edges. A bipartite graph G is referred as 4-Sachs optimal if

$$\mathbf{a}_4(G) = \min\{\mathbf{a}_4(H) | H \in \mathfrak{B}_{n,m}\}.$$

For any given integer pair (n, m), in this paper we investigate the 4-Sachs optimal bipartite graphs. Firstly, we show that each 4-Sachs optimal bipartite graph is a difference graph. Then some structural properties of 4-Sachs optimal bipartite graphs will be deduced. Especially, we determine the unique 4-Sachs optimal bipartite (n, m)-graphs for $n \geq 5$ and $n - 1 \leq m \leq 2(n - 2)$. Finally, we provides a

method to construct a class of cospectral difference graphs, which disprove a Conjecture posed by Andelić et al. [M. Andelić, Z. Du, C. M. da Fonseca, S. K. Simić, Tridiagonal matrices and spectral properties of some graph classes, *J. Czechoslovak Math.* doi: 10.21136/CMJ. 2020. 0182-19.].

Transversal structures in graphs and hypergraphs

韩杰 (Jie Han)

Beijing Institute of Technology

Abstract

There has been a recent research trend on finding transversal (rainbow) structures in graph systems. A simple example will be: given a sequence of graphs G_1, G_2, ..., G_n on the same vertex set of n vertices, under what condition one can find a Hamiltonian cycle that uses exactly one edge from each graph G_i? We introduce the recent developments on this series of problems.

Learn to solve dominating set problem with graph neural networks

何伟骅 (Weihua He)

Guangdong University of Technology

Abstract

The idea using neural networks to solve combinatorial optimization problems has been shown to be effective and time-saving in recent years. Inspired by these studies, we train a neural network by DDQN to solve dominating set problem. To better capture the features and structure of the graph, we use a message passing network for the graph representation. We validate our model on graphs of different sizes, and even on real-world networks.

On induced subgraph of Cartesian product of paths or cycles

侯新民 (Xinmin Hou)

University of Science and Technology of China

Abstract

Chung, Furedi, Graham, and Seymour (JCTA, 1988) constructed an induced subgraph of the hypercube Q^n with $\alpha(Q^n)+1$ vertices and with maximum degree smaller than $\lceil\sqrt{n}\rceil$. Subsequently, Huang (Annals of Mathematics, 2019) proved the Sensitivity Conjecture by demonstrating that the maximum degree of such an induced subgraph of hypercube Q^n is at least $\lceil\sqrt{n}\rceil$, and posed the question: Given a graph G, let $f(G)$ be the minimum of the maximum degree of an induced subgraph of G on $\alpha(G)+1$ vertices, what can we say about $f(G)$? In this talk, we investigate this question for Cartesian product of paths P_m (resp. C_m), denoted by P_m^k (resp. C_m^k). We determine the exact values of $f(P_m^k)$ (resp. $f(C_m^k)$) when $m=2n+1$ by showing that $f(P_{2n+1}^k)=1$ for $n\geq 2$ and $f(P_3^k)=2$ (resp. $f(C_m^k)=1$ when $m=2n+1$), and give a nontrivial lower bound of $f(P_m^k)$ (resp. $f(C_m^k)$) when $m=2n$ by showing that $f(P_{2n}^k)\geq\lceil\sqrt{\beta_n k}\rceil$ (resp. $f(C_m^k)\geq\lceil\sqrt{\beta_n k}\rceil$). In particular, when $n=1$, we have $f(Q^k)=f(P_2^k)\geq\sqrt{k}$, which is Huang's result. The lower bounds of $f(P_3^k)$, $f(P_{2n}^k)$ and $f(P_{2n}^k)$ are given by using the spectral method provided by Huang. (This is a joint work with Jiasheng Zeng).

Erdős-Gyárfás Conjecture for P_{10}-free graphs

胡智全 (Zhiquan Hu)

Central China Normal University

Abstract

Let P_{10} be a path on 10 vertices. A graph is said to be P_{10}-free if it does not contain P_{10} as an induced subgraph. The well-known Erdős-Gyárfás Conjecture states that every graph with minimum degree at least three has a cycle whose length is a power of 2. In this paper, we show that every P_{10}-free graph with minimum degree at least three contains a cycle of length 4 or 8. This implies that the conjecture is true for P_{10}-free graphs.

Cliques and independent sets of the Birkhoff polytope graph

黄泽军 (Zejun Huang)

Shenzhen University

Abstract

The Birkhoff polytope graph has a vertex set equal to the elements of the symmetric group of degree n, and two elements are adjacent if one element equals the product of the other element with a cycle. Maximal and maximum cliques and independent sets of the Birkhoff polytope graph will be presented. Bounds are obtained for different sizes of such sets.

The saturation number of spanning trees with at most three leaves

计省进 (Shengjin Ji)

Shandong University of Technology

Abstract

Given a family of graphs $\mathcal{F}$, the graph G is called $\mathcal{F}$-saturated if G contains no member of $\mathcal{F}$ as a subgraph, but $G+e$ contains a copy of $F \in \mathcal{F}$ for every edge $e \in E(\overline{G})$. The minimum size of an n-vertex $\mathcal{F}$-saturated graph is denoted by $\mathrm{sat}(n, \mathcal{F})$. In particular, if $\mathcal{F} = \{F\}$, then we write F-saturated and $\mathrm{sat}(n, F)$ in place of $\mathcal{F}$-saturated and $sat(n, \mathcal{F})$, respectively. We use $p(T)$ to denote the number of leaves in T. Let $\mathcal{T}_n^{\leq 3} = \{T | \, T \,\text{is a tree with}\, p(T) \leq 3 \,\text{and}\, |T| = n\}$. According to the known results, except for some finite n, saturation number for spanning subgraphs of order n as hamilton cycles and paths are determined, more formally, $sat(n, C_n) = \lceil \frac{3n}{2} \rceil$ and $sat(n, P_n) = \lceil \frac{3n-2}{2} \rceil$. In this talk, we focus on $\mathcal{T}_n^{\leq 3}$-saturated graphs and show that $sat(n, \mathcal{T}_n^{\leq 3}) = \lfloor \frac{3n-2}{2} \rfloor$. The work is joint with Kenta Ozeki.

(I, F)-partition of planar graphs without cycles of length 4, 6, or 9

金利刚 (Ligang Jin)

Zhejiang Normal University

Abstract

A graph G is (I, F)-partitionable (also called near-bipartite) if its vertex set can be partitioned into two parts such that one part is an independent set, and the other induces a forest. Clearly, a (I, F)-partitionable graph is signed 3-colorable, and surely 3-colorable. In this talk, I will first review a few results on 3-colorability of planar graphs with restriction on short cycles. Then I will present a recent result that every planar graph with neither 4- or 6-cycles nor special 9-cycles is (I, F)-partitionable. This is joint work with Yingli Kang and Hongkai Lu.

On the maximum local mean order of sub-k-trees of a k-tree

金贤安 (Xianan Jin)

Xiamen University

Abstract

For a k-tree T, a generalization of a tree, the local mean order of sub-k-trees of T is the average order of sub-k-trees of T containing a given k-clique. The problem whether the largest local mean order of a tree (i.e., a 1-tree) at a vertex always takes on at a leaf was asked by Jamison in 1984 and was answered by Wagner and Wang in 2016. In 2018, Stephens and Oellermann asked a similar problem: for any k-tree T, does the maximum local mean order of sub-k-trees containing a given k-clique occur at a k-clique that is not a major k-clique of T? Recently we gave it an affirmative answer.

A characterization of extremal non-transmission-regular graphs by the distance (signless Laplacian) index and maximum transmission

兰静芬 (Jingfen Lan)

Xidian University

Abstract

Let G be a simple connected graph of order n and $\partial(G)$ is the spectral radius of the distance matrix $D(G)$ of G. The transmission D_i of vertex i is the i-th row sum of $D(G)$. Denote by $D_{\max(G)}$ the maximum of transmissions over all vertices of G, and $\partial^Q(G)$ is the spectral radius of the distance signless Laplacian matrix $D(G) + diag(D_1, D_2, \ldots, D_n)$. In this talk, we present a sharp lower bound of $2D_{\max}(G)-\partial^Q(G)$ among all n-vertex connected graphs, and characterize the extremal graphs. Furthermore, we give the minimum values of respective $D_{\max}(G)-\partial(G)$ and $2D_{\max}(G)-\partial^Q(G)$ on trees and characterize the extremal trees.

Forbidden pairs of disconnected graphs for supereulerianity of connected graphs

李斌龙 (Binlong Li)

Northwestern Polytechnical University

Abstract

A graph is called supereulerian if it contains a spanning connected even subgraph. In 1979, Pulleyblank showed that determining whether a graph is supereulerian, even when restricted to planar graphs, is NP-complete. Lv and Xiong (Discrete Math. 340, 2017) used the forbidden induced subgraphs condition to investigate the supereulerianity.

In this paper, we use the forbidden induced disconnected subgraphs condition to investigate the supereulerianity. We characterize all pairs of graphs R, S such that every 2-connected or 2-edge-connected $\{R, S\}$-free graph (of sufficiently large order) is supereulerian. As a byproduct, we also generalize a result by Wang and Xiong (Discrete Math. 340, 2017), characterize all minimal 2-connected non-supereulerian graphs. To prove our results, we use three methods including Ryjáček's closure, Lai's induced minor and Catlin's reduction.

Homogenous graphs

李才恒 (Caiheng Li)

Southern University of Science and Technology

Abstract

For a positive integer k, a graph is called k-homogenous if any two isomorphic induced subgraphs are equivalent under the automorphism group of the graph, namely, any local symmetry is a global symmetry. I will report on recent progress on the problem of characterizing k-homogenous graphs. (This is a joint work with Jinxin Zhou and Fugang Yin).

Polynomial algorithms for computing the isolated toughness of interval and split graphs

李峰伟 (Fengwei Li)

Ningbo University of Finance and Economics

Abstract

The isolated toughness of an incomplete graph G is defined as

$$i\tau(G) = \min\left\{\frac{|S|}{i(G-S)} : S \in C(G), i(G-S) > 1\right\}.$$

Otherwise, we set $i\tau(G) = +\infty$ if G is complete. This parameter has a close relationship with the existence of factors and fractional factors of graphs. These factors and fractional factors are well-studied within graph theory, and have various applications in several fields related to computer science. In this paper, we pay our attention to computational complexity of isolated toughness, and present polynomial algorithms for computing the exact value of the isolated toughness for interval graphs and for split graphs, two well-studied special graph classes.

三代测序数据足以完美重构人类基因组

李国君 (Guojun Li)

Shandong University

Abstract

基因组是承载一切生命奥秘的载体，因此，获取基因组是破译生命奥秘的关键。测序技术和计算技术（测力 + 算力）的飞速发展使得一切物种基因组的精准计算预测成为可能。借此机会报告人李国君教授介绍测序数据的历史进程，图论与组合最优化在生物数据分析中的应用，分享他们利用普通三代数据重构基因组的最新进展。

Polynomials of hypergraphs

李红海 (Honghai Li)

Jiangxi Normal University

Abstract

In this talk we discuss some polynomials of uniform hypergraphs and present some interesting properties between them and related to eigenvalues of hypergraphs, in which some classical results in the literature are generalized to uniform hypergraphs and some conjectures years ago can be resolved completely.

Vertex cut, eigenvalues, $[a, b]$-factors and toughness of connected bipartite graphs

李书超 (Shuchao Li)

Central China Normal University

Abstract

For positive integers $a \leq b$, an even (resp. odd) $[a, b]$-factor of a graph G is a spanning subgraph F such that $a \leq d_F(v) \leq b$ and $d_F(v)$ is even (resp. odd) for all $v \in V(G)$. For a connected graph G, the toughness $t(G)$ of G is defined as

$t(G) = \min\{|S|/c(G-S)\}$, in which the minimum is taken over all proper vertex-subsets S such that $G-S$ is disconnected, where $c(G-S)$ denotes the number of components of $G-S$. In this talk, we first consider the following problem: Assume S is a vertex cut of a connected bipartite graph G, then let H be a component of $G-S$. If the number of edges between $V(H)$ and S (in G) is bounded above, then we establish a sharp lower bound on adjacency spectral radius $\rho(H)$, and the corresponding extremal graphs are characterized. Based on this result, on the one hand, we establish sharp upper bounds on certain eigenvalues for a bipartite graph with given maximum degree, minimum degree and edge connectivity to ensure that the bipartite graph contains an even $[a,b]$-factor or an odd $[a,b]$-factor; On the other hand, we give sufficient spectral conditions for a bipartite graph with given maximum degree, minimum degree and edge connectivity to guarantee that its toughness is 1, which improves some known results. This is a joint work with Yifang Hao.

On a conjecture of Conlon, Fox and Wigderson

林启忠 (Qizhong Lin)

Fuzhou University

Abstract

For graphs G and H, the Ramsey number $r(G,H)$ is the smallest positive integer N such that any red/blue edge coloring of the complete graph K_N contains either a red G or a blue H. A book B_n is a graph consisting of n triangles all sharing a common edge.

Recently, Conlon, Fox and Wigderson (2023) conjecture that for any $0<\alpha<1$, the random lower bound $r(B_{\lceil \alpha n\rceil}, B_n) \geq (\sqrt{\alpha}+1)^2 n + o(n)$ would not be tight. In other words, there exists some constant $\beta = \beta(\alpha) > 0$ such that $r(B_{\lceil \alpha n\rceil}, B_n) \geq (\sqrt{\alpha}+1)^2 n + \beta n$ for all sufficiently large n. This conjecture holds for every $\alpha < 1/6$ from an early result of Nikiforov and Rousseau (2005), i.e., for every $\alpha < 1/6$ and large n, $r(B_{\lceil \alpha n\rceil}, B_n) = 2n+3$.

We disprove the conjecture of Conlon et al. (2023). Indeed, we show that the random lower bound is asymptotically tight for every $1/4 \leq \alpha \leq 1$. Moreover, we show that for any $1/6 \leq \alpha \leq 1/4$ and large n, $r(B_{\lceil \alpha n\rceil}, B_n) \leq \left(\frac{3}{2}+3\alpha\right) n + o(n)$, where the inequality is asymptotically tight when $\alpha = 1/6$ or $1/4$. We also give a lower bound of $r(B_{\lceil \alpha n\rceil}, B_n)$ for $1/6 \leq \alpha < \frac{52-16\sqrt{3}}{121} \approx 0.2007$, showing that the

random lower bound is not tight, i.e., the conjecture of Conlon et al. (2023) holds in this interval. Joint work with Chunchao Fan and Yuanhui Yan.

Highly connected triples and Mader's conjecture

刘清海 (Qinghai Liu)

Fuzhou University

Abstract

Mader [J. Graph Theory 69 (2012) 324-329] proved that, for any tree T of order m, every k-connected graph G with $\delta(G) \geq 2(k+m-1)^2 + m - 1$ contains a subtree $T' \cong T$ such that $G - V(T')$ is k-connected. We proved that for any graph G with minimum degree $\delta(G) \geq 2k$, then G contains k-connected triples. As a corollary, we prove that, for any tree T of order m, every k-connected graph G with $\delta(G) \geq 3k + 4m - 6$ contains a subtree $T' \cong T$ such that $G - V(T')$ is still k-connected, improving Mader's condition to a linear bound. This work is joint with Yanmei Hong, and Kai Ying.

Even cycle decompositions of Eulerian graphs

刘文忠 (Wenzhong Liu)

Nanjing University of Aeronautics and Astronautics

Abstract

An even cycle decomposition of a graph is a partition of its edges into cycles of even length. A graph is strongly even cycle decomposable if any of its subdivisions with an even number of edges admits an even cycle decomposition. In 2012, Markström conjectured if G is a 2-connected cubic graph, then the line graph $L(G)$ is even cycle decomposable. Máčajová and Mazák further asked whether such a line graph $L(G)$ is strongly even cycle decomposable. In this talk, we introduce our some results on the conjecture and the problem.

Spectral radius of graphs with given size and odd girth

娄贞贞 (Zhenzhen Lou)

University of Shanghai for Science and Technology

Abstract

Let $\mathcal{G}(m,k)$ be the set of graphs with size m and odd girth (the length of a shortest odd cycle) k. In this talk, we introduce a result on maximizing the spectral radius among $\mathcal{G}(m,k)$ when m is odd. This result settles the conjecture of Li and Peng [The Electronic J. Combin. 29 (4) (2022)].

The structure of maximal cross t-intersecting families with given covering numbers

吕本建 (Benjian Lv)

Beijing Normal University

Abstract

Let n, k_1, k_2 and t be positive integers, and $\mathcal{F}_i$ $(i \in \{1,2\})$ be a family of k_i-subsets of an n-set V. The families $\mathcal{F}_1$ and $\mathcal{F}_2$ are said to be cross t-intersecting if $|F_1 \cap F_2| \geq t$ for all $F_i \in \mathcal{F}_i$ $(i \in \{1,2\})$. For each $\mathcal{F}_i$, the t-covering number of $\mathcal{F}_i$ is the minimum size of a subset T of V such that $|T \cap F| \geq t$ for all$F \in \mathcal{F}_i$. In this talk, I will show some results about the structure of maximal cross t-intersecting families with given covering numbers.

A counterexample to a conjecture about triangle-free induced subgraphs of graphs with large chromatic number and small clique number

苗连英 (Lianying Miao)

China University of Mining and Technology

Abstract

In this paper, we prove that for every n, there is a graph G with $\chi(G) \geq n$ and $\omega(G) \leq 3$ such that every induced subgraph H of G with $\omega(H) \leq 2$ satisfies $\chi(H) \leq 3$. This disproves a well-known conjecture for the remaining case $r = 4$. The conjecture is true for the case $r \leq 3$ and is disproved for the case $r \geq 5$ by A. Carbonero et al. in 2023.

图论及优化算法在图数据挖掘中的应用

亓兴勤 (Xingqin Qi)

Shandong University

Abstract

数据的“图型”表示或者“网络型”表示，可以将数据间属性相关性充分表达，获取比普通向量表示更为丰富的额外信息，因此，图在诸多应用场景中成为最基本的数据表达结构。如何利用图论及优化算法对海量的图数据中的蕴含信息进行挖掘，成为多学科各个领域所面临的挑战。该报告主要关注社会网络上关键节点的识别问题，该问题在舆情控制、产品营销、疾病传播与控制等方面有重要的应用价值。我们将报告在不同优化目标下，基于图论方法设计的多个关键节点识别算法。

Estrada index of hypergraphs via eigenvalues of tensors

孙丽珠 (Lizhu Sun)

Harbin Engineering University

Abstract

A uniform hypergraph $\mathcal{H}$ is corresponding to an adjacency tensor $\mathcal{A}_{\mathcal{H}}$. We define an Estrada index of $\mathcal{H}$ by using all the eigenvalues $\lambda_1, \ldots, \lambda_k$ of $\mathcal{A}_{\mathcal{H}}$ as $\sum_{i=1}^{k} e^{\lambda_i}$. The bounds for the Estrada indices of uniform hypergraphs are given.

Arc-disjoint strong subgraphs containing given vertices

孙跃方 (Yuefang Sun)

Ningbo University

Abstract

The famous Steiner tree packing problem in undirected graphs is not only an important theoretical problem, but also has a strong background in applications, especially in VLSI circuit design. It attracts much attention of researchers in the areas of graph theory, combinatorial optimization and theoretical computer science, and has become an well-established area. It is natural to extend this problem to digraphs, and such problems in digraphs are called directed Steiner type packing problems, including directed Steiner tree packing problem and strong subgraph packing problem. In this talk, we introduce known results on the topic of strong subgraph packing problem.

l_1-embeddability of shifted quadrilateral cylinder graphs

王广富 (Guangfu Wang)

Yantai University

Abstract

A connected graph G is called l_1-embeddable, if it can be isometrically embedded into the l_1-space. The shifted quadrilateral cylinder graph $O_{m,n,k}$ is a class of quadrilateral tilings on a cylinder obtained by rolling the grid graph $P_m \Box P_n$ via shifting k positions. Let $\mathcal{O}_{m,n,k} = \{O_{m,n,k} : m \geq 3, n \geq 3, 0 \leq k < m-1\}$. We obtain that G is an l_1-graph if and only if G is in $\mathcal{O}_{m,n,0} \cup \mathcal{O}_{m,3,1}$.

On the connnected graphs with two positive eigenvalues

王建锋 (Jianfeng Wang)

Shandong University of Technology

Abstract

In 1977, Smith characterized the connected graphs with exactly one positive eigenvalue. Hereafter, the researchers have drawn their attentions to determine the connected graph with exactly two positive eigenvalues over the last forty years. Based on the previous studies, we finally give such a complete characterization in this report.

This is a joint work with F. Duan, Q.X. Huang, X.Y. Huang and Z. Stanic.

An improvement of sufficient condition for k-leaf-connected graphs

王力工 (Ligong Wang)

Northwestern Polytechnical University

Abstract

A graph G is called k-leaf-connected if $|V(G)| \geq k+1$ and given any subset $S \subseteq V(G)$ with $|S| = k \geq 2$, G always has a spanning tree T such that S is precisely the set of leaves of T. Thus a graph is 2-leaf-connected if and only if it is Hamilton-connected. In this talk, we give a best possible condition based upon the size to guarantee a graph to be k-leaf-connected, which not only improves the results of Gurgel and Wakabayashi [On k-leaf-connected graphs, J. Combin. Theory Ser. B 41 (1986) 1-16] and Ao, Liu, Yuan and Li [Improved sufficient conditions for k-leaf-connected graphs, Discrete Appl. Math. 314 (2022) 17-30], but also extends the result of Xu, Zhai and Wang [An improvement of spectral conditions for Hamilton-connected graphs, Linear Multilinear Algebra, 2021]. Our key approach is showing that an $(n+k-1)$-closed non-k-leaf-connected graph must contain a large clique if its size is large enough. As applications, sufficient conditions for a graph to be k-leaf-connected in terms of the (signless Laplacian) spectral radius of G or its complement are also presented. This is a joint work with Tingyan Ma, Guoyan Ao, Ruifang Liu and Yang Hu.

On Seymour's and Sullivan's second neighbourhood conjectures

王书晶 (Shujing Wang)

Central China Normal University

Abstract

In 1995, Seymour conjectured that for any oriented graph D there exists a vertex x such that $d^+(x) \leq d^{++}(x)$. In 2006, Sullivan conjectured that there exists a vertex x in D such that $d^-(x) \leq d^{++}(x)$. We give a sufficient condition in terms of the number of transitive triangles for an oriented graph to satisfy Sullivan's conjecture. In particular, this implies that Sullivan's conjecture holds for all orientations of planar graphs and of triangle-free graphs. We also show that the two conjectures hold for some families of oriented split graphs, in particular, when Y induces a regular or an almost regular tournament.

A structure theorem for the restricted sum of four squares

王卫 (Wei Wang)

Xi'an Jiaotong University

Abstract

The representation of integers by sum of squares is an old problem, which has been studied intensively since the time of Euler and Lagrange. A classic result of Lagrange states that every non-negative integer can be expressed as the sum of four squares of integers. Some variants of Lagrange Four Square Theorem have been studied by several authors in recent years. Let p be a prime. We show that each solution of the system of congruence equations $x_1^2+x_2^2+x_3^2+x_4^2 \equiv 0 \pmod{p}$, $x_1+x_2+x_3+x_4 \equiv 0 \pmod{p}$ gives rise to precisely four solutions of the system of Diophantine equations $x_1^2+x_2^2+x_3^2+x_4^2 = p^2$ and $x_1+x_2+x_3+x_4 = p$ over $\mathbb{Z}$ such that these solutions are pairwise orthogonal over $\mathbb{Q}^4$, partially answering a recent conjecture of Wang, Wang and Yu. The result was obtained by counting the number of solutions of both equations using Gaussian sum, modular forms, and the classical Cayley transformation.

Extremal spectral results of planar graphs without $C_{l,l}$ or $Theta$ graph

王文环 (Wenhuan Wang)

Shanghai University

Abstract

Let $\mathcal{F}$ be a given family of graphs. A graph G is $\mathcal{F}$-free if it does not contain any member of $\mathcal{F}$ as a subgraph. Let $C_{l,l}$ be a graph obtained from $2C_l$ such that the two cycles share a common vertex, where $l \geqslant 3$. Let Θ_k be a $Theta$ graph obtained from a cycle C_k by adding an additional edge between two non-consecutive vertices on C_k, where $k \geqslant 4$. We characterize the unique extremal planar graph with the maximum spectral radius among F-free planar graphs on n vertices, where $F = C_{l,l}$ with $l \geqslant 3$ and $F = \Theta_k$ with $k \geqslant 4$, and n is sufficiently large.

多个非负方阵的动力学

吴耀琨 (Yaokun Wu)

Shanghai Jiao Tong University

Abstract

我国组合数学前辈在单个非负方阵的本原性，可约性等各种动力学行为研究上取得许多杰出成绩。我们试图继续这一工作传统，开展其在多个矩阵情形的相应研究。本报告汇报与乌拉尔联邦大学祝隐峰博士一起完成的一些工作。

On eulerian subgraphs and hamiltonian line graph

谢轶康 (Yikang Xie)

Jiangxi Normal University

Abstract

A graph is **Hamiltonian** if it contains a spanning cycle. A graph G is **Hamilton-connected** if for any distinct $u, v \in G$, G has a subgraph H such that H is an internally disjoint (u, v)-paths and $V(H) = V(G)$. Hamilton-connected $\Rightarrow$ Hamiltonian.
Theorem (Chvátal, Vasek, and Paul Erdös [1])

(i) If $\kappa(G) \geq \alpha(G)$, then G is Hamiltonian.

(ii) If $\kappa(G) \geq \alpha(G) + 1$, then G is Hamiltonian-connected.

We can understand Hamiltonian properties via Menger's Theorem. Denote $\kappa(G)$ as connectivity of G. For any integer $s > 0$ and for $u, v \in V(G)$ with $u \neq v$, define an $(s; u, v)$**-path-system** of G is a subgraph H consisting of s internally disjoint (u, v)-paths, and we say H is a $(s; u, v)$**-spanning path-system** if $V(H) = V(G)$. Then Hamilton cycle is a $(2; u, v)$-spanning path-system and G is Hamilton connected $\Leftrightarrow$ For any distinct $u, v \in V(G)$, G has a $(1; u, v)$-spanning path-system.

Forbidden pair for even factor in supereulerian graphs

熊黎明 (Liming Xiong)

Beijing Institute of Technology

Abstract

A graph is called supereulerian if it has a spanning eulerian subgraph. An even factor of a graph is a spanning subgraph with all vertices of even degree. In this paper, we will discuss forbidden subgraphs and even factors. We shall characterize some class of graphs $\mathcal{F}$ such that under certain connectivity condition every $\mathcal{F}$-free graph (of sufficiently large order) is supereulerian.

On the number of subgraphs in a graph

许克祥 (Kexiang Xu)

Nanjing University of Aeronautics and Astronautics

Abstract

The study on the number of subgraphs in a graph is a hot topic in enumerative combinatorics with some related problems. Extremal problems in this field are much attractive in graph theory. Many results are published on the number of subtrees for trees, but there are few results for the general graphs. In this talk we characterize the extremal graphs with the number of subtrees among all connected graphs of order n with s cut edges, cacti of order n with s cycles, and block graphs of order n with s blocks, respectively. And a partial solution is provided to a conjecture for the mean subtree order of trees posed in 1984. Moreover, several results are proved for the local and global mean orders of sub-k-trees of k-trees. Furthermore, a complete solution is obtained to a conjecture of the probability that a random subtree of K_n contains a given edge.

On the polynomial reconstruction of graphs and digraphs

晏卫根 (Weigen Yan)

Jimei University

Abstract

我们将简单介绍图的顶点重构、图的边重构与图的特征多项式重构猜想的一些结果，以及我们最近在图及有向图的特征多项式与积和式多项式的边重构方面得到的结果。

On poidge-convexity

苑立平 (Liping Yuan)

Hebei Normal University

Abstract

Let $\mathscr{F}$ be a family of sets in R^d(always $d \geq 2$). A set $M \subset R^d$ is called $\mathscr{F}$-convex, if for any pair of distinct points $x, y \in M$, there is a set $F \in \mathscr{F}$ such that $x, y \in F$ and $F \subset M$. We obtain the poidge-convexity, when $\mathscr{F}$ consists of all unions $\{x\} \cup \sigma$, called poidges, where x is a point, σ a line-segment, and conv$(\{x\} \cup \sigma)$ a

right triangle. In this talk we first present several results on the poidge-convexity of various sets. Then, we investigate the poidge-convex completion of some compact sets, trying to determine the minimal cardinality of points necessary to be added to make them poidge-convex.

Supersaturation beyond edge-critical graphs

袁龙图 (Longtu Yuan)

East China Normal University

Abstract

Let G be a given graph with $\lambda(G) = k$, if the decomposition family of G, $\mathcal{M}(G)$, contains a copy of M_k, then we say that G is matching critical. Turán number, $\mathrm{ex}(n, F)$, of a graph F implies that a graph on n vertices with $\mathrm{ex}(n, F) + 1$ edges contains at least one copy of F. Denote by $\#F(H)$ the number of copies of F in graph H. We will consider the following question for matching critical graphs.

Question. Determine the following function for a graph F:

$$h_F(n, q) = \min\{\#F(H) : |V(H)| = n, |E(H)| = \mathrm{ex}(n, F) + q\},$$

the minimum number of copies of F in a graph H on n vertices and $\mathrm{ex}(n, F) + q$ edges.

Polychromatic edge-colorings of subgraphs of balanced complete bipartite graphs and beyond

张霞 (Xia Zhang)

Shandong Normal University

Abstract

Let G be a graph and $\mathcal{W}$ is a set of some subgraphs of G. An m-edge-coloring of G is called $\mathcal{W}$-polychromatic if every subgraph isomorphic to an element from $\mathcal{W}$ receives all m colors. The largest number m, for which G confirms a $\mathcal{W}$-polychromatic m-edge-coloring, is called the $\mathcal{W}$-polychromatic number of G and

denoted by $p_{\mathcal{W}}(G)$. Let G be a host graph, F be a subgraph of G. The Turán number $ex(G, F)$ is the maximum edge number of F-free-subgraphs of G. The subgraph polychromatic edge-coloring problem of graphs is closely related to the Turán problem.

In this talk, we discuss the $\mathcal{W}$-polychromatic edge-coloring problem of complete bipartite graph $K_{n,n}$, and determine the exact value of $\mathcal{W}$-polychomatic number to be $n+1$, $n+1$, $\lfloor \frac{n^2}{3} \rfloor$, respectively, when $\mathcal{W}$ is one of three sets of subgraphs of $K_{n,n}$: Hamilton cycles, 2-factors, $K_{n-1,n-1}$s. Furthermore, when host graph is $K_{n,n}$, we determine that the Turán number of any 2-factor of $K_{n,n}$ is $n^2 - n + 1$. (Joint work with Zhenzhen Jiang, Xinmiao Zhang.)

Crossing number of graphs with low local crossing number

张欣 (Xin Zhang)

Xidian University

Abstract

The crossing number of a graph G is the lowest number of edge crossings of a plane drawing of the graph G. The local crossing number of a drawing of a graph G is the largest number of times that a single edge in the drawing is crossed. In other words, the local crossing number of G is the least non-negative integer k such that G has a drawing in the plane so that each edge is crossed at most k times. In this talk, I give sharp upper bounds for the crossing number of graphs with local crossing number at most two. In addition, I will apply those bounds to show that K_8 is not 2-planar, which was proved in 2019 with computer assistance.

On the distribution of Laplacian eigenvalues

周波 (Bo Zhou)

South China Normal University

Abstract

It is known that the Laplacian eigenvalues of an n-vertex simple graph belongs to $[0, n]$. Ahanjideh, Akbari, Fakharan and Trevisan conjectured that for any connected graph of order n with diameter $d \geq 2$ that is not a path, the number of Laplacian eigenvalues in $[n-d+2, n]$ is at most $n-d$. We show that the conjecture is true, and if $1 \leq d \leq n-3$, there are at most $n-d+1$ Laplacian eigenvalues in $[n-d+1, n]$. We also try to identify the connected graphs on n vertices with diameter d, where $2 \leq d \leq n-3$, such that there are at most $n-d$ Laplacian eigenvalues in $[n-d+1, n]$.

Oriented spanning trees and stationary distribution of digraphs

周江 (Jiang Zhou)

Harbin Engineering University

Abstract

By using biclique partitions of digraphs, this paper gives reduction formulas for the number of oriented spanning trees, stationary distribution vector and Kemeny's constant of digraphs. As applications, we give a method for enumerating spanning trees of undirected graphs by vertex degrees and biclique partitions. The biclique partition formula also extends the results of Knuth and Levine from line digraphs to general digraphs.

Symmetry in graphs

周进鑫 (Jinxin Zhou)

Beijing Jiaotong University

Abstract

Symmetry of graphs is one of the most important topics in the study of groups and graphs, and in recent years, a large body of research have been developed to explain many aspects on graph symmetry. In this talk, I will survey some old and new results in this area.

Log-concavity of sequences from total positivity

祝宝宣 (Baoxuan Zhu)

Jiangsu Normal University

Abstract

Log-concave sequences occur often in combinatorics, analysis, algebra, geometry, probability and statistics. It is often a difficult problem to show log-concavity. In combinatorics, log-concavity has always been of great interest to researchers. Especially, June Huh was awarded the Fields Medal in 2022 because he brought the Hodge theory to log-concavity problems in combinatorics in recent years. Total positivity of matrices is a powerful tool and has many applications in different branches of mathematics. In this talk, we will report some results for log-concavity from total positivity.

通讯录		
姓名	**学校**	**邮箱**
艾江东	南开大学	jiangdongai95@gmail.com
安明强	天津科技大学	anmq@tust.edu.cn
白旭清	西安电子科技大学	baixuqing@xidian.edu.cn
白延东	西北工业大学	bai@nwpu.edu.cn
宝音都仍	新疆大学	wubaoyin@hotmail.com
边红	新疆师范大学	bh1218@163.com
蔡俊青	天津师范大学	caijq09@163.com
蔡庆琼	南开大学	Caiqiongqiong@nankai.edu.cn
常安	福州大学	anchang@fzu.edu.cn
陈海燕	集美大学	chey5@jmu.edu.cn
陈静	山东师范大学	chenjing827@126.com
陈莉莉	华侨大学	lily60612@126.com
陈敏	浙江师范大学	chenmin@zjnu.cn
陈容	福州大学	rongchen@fzu.edu.cn
陈晓峥	郑州大学	cxz@zzu.edu.cn
陈仪朝	苏州科技大学	ycchen@hnu.edu.cn
成鑫	西北工业大学	xincheng@mail.nwpu.edu.cn
崔庆	南京航空航天大学	cui@nuaa.edu.cn
邓波	青海师范大学	dengbo450@163.com
邓兴超	天津师范大学	dengyuqiu1980@126.com
翟明清	滁州学院	mqzhai@126.com
丁龙云	南开大学	dingly@nankai.edu.cn

杜海星	南开大学	duhaixing@mail.nankai.edu.cn
房宜宾	南开大学	yibin_fang@163.com
冯立华	中南大学	fenglh@163.com
冯荣权	北京大学	fengrq@math.pku.edu.cn
冯星	集美大学	fengxing_fm@163.com
冯耀坤	南开大学	1031679547@qq.com
付凤	青海师范大学	fufeng9811@163.com
高靖	南开大学	gjing1270@163.com
高锁刚	河北师范大学	sggaomail@163.com
高焰红	河南师范大学	gyh930623@163.com
龚世才	浙江科技学院	scgong@zust.edu.cn
谷珊珊	南开大学	gu@nankai.edu.cn
管锐	南开大学	a17560731903@163.com
郭龙	南开大学	lguo@nankai.edu.cn
郭琪文	南开大学	gqwmath@mail.nankai.edu.cn
郭强辉	南开大学	guo@nankai.edu.cn
韩杰	北京理工大学	han.jie@bit.edu.cn
韩苗苗	天津师范大学	mmhan2018@hotmail.com
郝荣霞	北京交通大学	rxhao@bjtu.edu.cn
何常香	上海理工大学	changxiang-he@163.com
何圣洁	天津商业大学	he1046436120@126.com
何伟骅	广东工业大学	hwh12@gdut.edu.cn
贺凡康	南开大学	1910037@mail.nankai.edu.cn
洪艳梅	福州大学	yhong@fzu.edu.cn

侯建锋	福州大学	jfhou@fzu.edu.cn
侯新民	中国科学技术大学	xmhou@ustc.edu.cn
侯耀平	湖南师范大学	yphou@hunnu.edu.cn
胡杰	南开大学	hujie@nankai.edu.cn
胡映祺	南开大学	nkuhyq@163.com
胡玉梅	天津大学	huyumei@tju.edu.cn
胡智全	华中师范大学	huzhiq63@ccnu.edu.cn
华洪波	淮阴工学院	hongbo_hua@163.com
黄申为	南开大学	shenweihuang@nankai.edu.cn
黄泽军	深圳大学	zejunhuang@szu.edu.cn
黄中	长江大学	hz@yangtzeu.edu.cn
火博丰	青海师范大学	hbf@qhnu.edu.cn
计省进	山东理工大学	jishengjin@sdut.edu.cn
冀蒙	天津师范大学	jimengecho@163.com
姜成林	南开大学	jiang77699@southyang.cn
金利刚	浙江师范大学	ligang.jin@zjnu.cn
金贤安	厦门大学	xajin@xmu.edu.cn
康丽英	上海大学	lykang@shu.edu.cn
亢莹利	金华职业技术学院	ylk8mandy@126.com
兰静芬	西安电子科技大学	jflan@xidian.edu.cn
兰永新	河北工业大学	yxlan@hebut.edu.cn
雷辉	南开大学	hlei@nankai.edu.cn
李斌龙	西北工业大学	binlongli@nwpu.edu.cn
李才恒	南方科技大学	lich@sustech.edu.cn

李辰星	南开大学	2010386@mail.nankai.edu.cn
李峰伟	宁波财经学院	fengwei.li@hotmail.com
李国君	山东大学	gjli@sdu.edu.cn
李恒哲	河南师范大学	lihengzhe@htu.edu.cn
李红海	江西师范大学	lhh@mail.ustc.edu.cn
李佳傲	南开大学	lijiaao@nankai.edu.cn
李佳萱	南开大学	2120210070@mail.nankai.edu.cn
李靖建	广西大学	lijjhx@gxu.edu.cn
李平	陕西师范大学	lp-math@snnu.edu.cn
李乔良	湖南师范大学	liqiaoliang@hunnu.edu.cn
李瑞虎	空军工程大学	liruihu@aliyun.com
李莎莎	宁波大学	lishasha@nbu.edu.cn
李书超	华中师范大学	lscmath@mail.ccnu.edu.cn
李文	新疆大学	1191825675@qq.com
李鑫源	南开大学	lixinyuan19@foxmail.com
李学良	南开大学	lxl@nankai.edu.cn
李一阳	中国建设银行总行	liyiyangnk@163.com
李雨生	同济大学	li_yusheng@tongji.edu.cn
李兆祥	南开大学	ZhaoxiangLee@ustc.edu
林辉球	华东理工大学	huiqiulin@126.com
林启忠	福州大学	linqizhong@fzu.edu.cn
刘凤霞	新疆大学	xjulfx@163.com
刘蒙蒙	兰州交通大学	Liumm05@163.com
刘木伙	华南农业大学	liumuhuo@scau.edu.cn

刘清海	福州大学	qliu@fzu.edu.cn
刘瑞芳	郑州大学	rfliu@zzu.edu.cn
刘素娟	天津科技大学	sjliu0529@126.com
刘伟浩	南开大学	1394545448@qq.com
刘文忠	南京航空航天大学	wzhliu7502@nuaa.edu.cn
刘晓刚	西北工业大学	xiaogliu@nwpu.edu.cn
刘艳	中国民航大学	yanliu@cauc.edu.cn
娄贞贞	上海理工大学	xjdxlzz@163.com
鲁红亮	西安交通大学	luhongliang@mail.xjtu.edu.cn
陆由	西北工业大学	luyou@nwpu.edu.cn
路在平	南开大学	lu@.nankai.edu.cn
吕本建	北京师范大学	bjlv@bnu.edu.cn
马迎宾	河南师范大学	mayingbincw@htu.cn
孟宪浩	南开大学	xianhaomeng@163.com
孟雨辰	南开大学	myc1024581190@163.com
苗连英	中国矿业大学	miaolianying@cumt.edu.cn
苗正科	江苏师范大学	zkmiao@jsnu.edu.cn
宁博	南开大学	bo.ning@nankai.edu.cn
彭兴	安徽大学	x2peng@ahu.edu.cn
亓兴勤	山东大学	qixingqin@163.com
邱敦	南开大学	qiudun@nankai.edu.cn
任春莹	南开大学	Rcy9820230019@nankai.edu.cn
史雅馨	新疆大学	1031666207@qq.com
史永堂	南开大学	shi@nankai.edu.cn

司源	南开大学	yuan_si@aliyun.com
苏博	南开大学	suboll@163.com
孙慧	南开大学	sunhui@nankai.edu.cn
孙丽珠	哈尔滨工程大学	sunlizhu678876@126.com
孙跃方	宁波大学	sunyuefang@nbu.edu.cn
田应智	新疆大学	tianyzhxj@163.com
王博	南开大学	bowang@nankai.edu.cn
王唱鑫	南开大学	Simonang@163.com
王广富	烟台大学	wgfmath@126.com
王建锋	山东理工大学	jfwang@sdut.edu.cn
王力工	西北工业大学	lgwang@nwpu.edu.cn
王美玲	华为技术有限公司	wangmeiling17@huawei.com
王宁宁	南开大学	ningnwang@126.com
王书晶	华中师范大学	wang06021@126.com
王素敏	南开大学	wangsm088@nankai.edu.cn
王素素	南开大学	zzushuxuewangsusu@163.com
王卫	西安交通大学	wang_weiw@163.com
王文环	上海大学	wangwenhuan@163.com
王星炜	南开大学	wsw82@nankai.edu.cn
王秀梅	郑州大学	wangxiumei@zzu.edu.cn
王志谦	南开大学	1522686578@qq.com
王周宁馨	南开大学	wangzhou@nankai.edu.cn
韦春燕	南开大学	yan1307015@163.com
魏美芹	上海海事大学	weimeiqin8912@163.com

翁银娣	浙江理工大学	1033174075@qq.com
吴腾	南开大学	wuteng@nankai.edu.cn
吴艳	南开大学	wuyan@nankai.edu.cn
吴耀琨	上海交通大学	ykwu@sjtu.edu.cn
吴叶舟	浙江大学	yezhouwu@zju.edu.cn
郗常清	南开大学	xcqmath@163.com
肖振超	南开大学	2012641@mail.nankai.edu.cn
谢轶康	江西师范大学	yx0010@mix.wvu.edu
熊黎明	北京理工大学	lmxiong@bit.edu.cn
徐常青	河北工业大学	chqxu@hebut.edu.cn
徐丽琼	集美大学	xuliqiong@jmu.edu.cn
徐敏	北京师范大学	xum@bnu.edu.cn
徐宁彦	南开大学	xny@mail.nankai.edu.cn
许克祥	南京航空航天大学	kexxu1221@126.com
晏卫根	集美大学	weigenyan@jmu.edu.cn
杨宁	南开大学	yn@mail.nankai.edu.cn
杨立波	南开大学	yang@nankai.edu.cn
杨卫华	太原理工大学	Ywh222@163.com
杨玉军	烟台大学	yangyj@yahoo.com
于广龙	岭南师范学院	yglong01@163.com
于桂海	贵州财经大学	yuguihai@126.com
袁龙图	华东师范大学	ltyuan@math.ecnu.edu.cn
苑立平	河北师范大学	lpyuan@hebtu.edu.cn
岳军	天津工业大学	yuejun06@126.com

张建斌	华南师范大学	zhangjb@scnu.edu.cn
张明祖	新疆大学	mzuzhang@163.com
张胜贵	西北工业大学	sgzhang@nwpu.edu.cn
张霞	山东师范大学	xiazhang@sdnu.edu.cn
张欣	西安电子科技大学	xzhang@xidian.edu.cn
张逸枫	南开大学	zhang.yifeng@nankai.edu.cn
张莹莹	中国民航大学	zyydlwyx@163.com
张玉婉	南开大学	15616934670@163.com
赵燕	泰州学院	zhaoyan81.2008@163.com
郑瑞玲	南开大学	
钟思科	南开大学	2120230011@mail.nankai.edu.cn
周波	华南师范大学	zhoubo@scnu.edu.cn
周江	哈尔滨工程大学	zhoujiang@hrbeu.edu.cn
周进鑫	北京交通大学	jxzhou@bjtu.edu.cn
祝宝宣	江苏师范大学	bxzhu@jsnu.edu.cn
左倩	南开大学	zuoqian_math@163.com