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所属教研室：应用数学教研室

■ 个人简介

教育经历

月/年	学校	专业	学位
09/1988-07/1992	华中师范大学	数学	学士
09/1992-07/1995	厦门大学	复分析	硕士
09/2001-07/2004	厦门大学	图论	博士
09/2007-06/2008	华东师范大学	数学	访问学者
08/2017-07/2018	加拿大 Simon Fraser 大学	数学	访问学者

工作经历

月/年	单位	职称
08/1998-10/2004	集美大学	讲师
11/2004-10/2010	集美大学	副教授
11/2010-	集美大学	教授

研究方向和指导学生情况

研究方向为组合图论，主要研究图上的随机游动和沙堆模型。现已在 SCI 类期刊上发表学术论文 30 多篇。2011 年开始带硕士研究生，已毕业的八名硕士研究生中有四名继续攻读博士研究生，并有两名学生的毕业论文被评为福建省优秀硕士毕业论文，两名学生在上学期拿到国家奖学金。

■ 科研（教学）项目、成果及专利等

1. 图的极限和其动力学行为, 国家自然科学基金面上项目 NSFC (No. 11771181), 主持人 01/2018-12/2021.
 2. 图上随机游动的若干问题, 国家自然科学基金青年项目 NSFC (No. 10501018), 主持人, 01/2006-12/2008.
 3. 图上沙堆模型中的组合概率问题, 福建省自然科学基金面上项目 (No. 2011J01015), 主持人, 04/ 2011-06/2014.
 4. 图上的随机游动和 Abelian 沙堆模型, 福建省自然科学基金面上项目 (No. 2015J01017), 主持人, 04/2015-06/2018.
 5. 统计模型中的若干问题, 国家自然科学基金面上项目 NSFC(No.11171134), 主要参加者, 01/2012-12/2015.
 6. 生成树的计数、临界群以及其它相关问题的研究, 国家自然科学基金面上项目 NSFC (No. 115711139), 主要参加者, 01/2016-12/2019.
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■ 发表论文及著作等情况

- [1] Linfeng Que, Haiyan Chen*, On the Kirchhoff index of a graph and the matchings of the subdivision, Discrete Applied Mathematics 310 (2022) 91–96.
- [2] Yufang Zhou, Haiyan Chen*, The Sandpile Group of a Family of Nearly Complete Graphs, Bull. Malays. Math. Sci. Soc. (2021) 44:625–637.
- [3] Yanan Zhang, Haiyan Chen*, The average Laplacian polynomial of a graph, Discrete Applied Mathematics 283 (2020) 737-743.
- [4] Haiyan Chen*, Bojan Mohar, The sandpile group of a polygon flower, Discrete Applied Mathematics 270 (2019) 68-82.
- [5] Yu Chen, Haiyan Chen*, The characteristic polynomial of a generalized join graph, Application Mathematics and Computation, 348(2019) 456-464.
- [6] Yingmin Shangguan, Haiyan Chen*, Two-point resistances in a family of self-similar (x,y) -flower networks, Physica A 523 (2019) 382-391.

- [7] Haiyan Chen*, Fuji Zhang, On HOMOLUMO Separation of Acyclic Molecules, MATCH Commun. Math. Comput. Chem. 80 (2018) 407-414.
- [8] Haiyan Chen*, Yu Chen Bartholdi Zeta Functions of Generalized Join Graphs, Graphs and Combinatorics (2018), 34: 207-222.
- [9] Haiyan Chen*, Hitting times for random walks on subdivision and triangulation graphs, Linear and Multilinear Algebra (2018), 66: 117-130.
- [10] Liyuan Shi, Haiyan Chen*, Resistance distances in the linear polyomino chain J. Appl. Math. Comput (2018), 57: 147-160.
- [11] Haiyan Chen*, Fuji Zhang, Spectral dynamics of graph sequences generated by subdivision and triangle extension, Electronic Journal of Linear Algebra (2017), 32:454-463.
- [12] Yingmin Shangguan, Haiyan Chen*, Two-point resistances in an Apollonian network, PHYSICAL REVIEW E (2017) 96, 062140.
- [13] Yingmin Shangguan, Haiyan Chen*, Resistance Distances in Vertex-Face Graphs. Zeitschrift fr Naturforschung A (2017), 73(2): 105-112.
- [14] Chuanqi Xiao, Haiyan Chen*, Andrei M. Raigorodskii, A connection between the Kekul structures of pentagonal chains and the Hosoya index of caterpillar trees, Discrete Applied Mathematics (2017), 232: 230-234.
- [15] Chuanqi Xiao, Haiyan Chen*, Lu Liu, Perfect matchings in random pentagonal

chains, J Math Chem (2017), 55: 1878-1886.

[16] Haiyan Chen*, Liwen Liao, The normalized Laplacian spectra of the corona and edge corona of two graphs, Linear and Multilinear Algebra (2017), 65: 582-592.

[17] Haiyan Chen*, Resistance Distances and Kirchhoff Index in Generalized Join Graphs, Z. Naturforsch. Zeitschrift fr Naturforschung A (2017), 72(3): 207-215.

[18] Liyuan Shi, Haiyan Chen*, Resistance distances and Kirchhoff index of graphs with an involution, Discrete Applied Mathematics, 215(2016) 185-196.

[19] Haiyan Chen*, Resistance Distances and Kirchhoff Index in Generalized Join Graphs, Zeitschrift fr Naturforschung A (2017), 72(3): 207-215.

[20] Chuanqi Xiao, Haiyan Chen*, Kekule structures of square-hexagonal chains and the Hosoya index of caterpillar trees, Discrete Mathematics 339 (2016), 506-510.

[21] Haiyan Chen*, Liwen Liao, The normalized Laplacian spectra of the corona and edge corona of two graphs, Linear and Multilinear Algebra (2017), 65: 582-592.

[22] Chuanqi Xiao, Haiyan Chen*, Dimer Coverings on Random Polyomino Chains, Z. Naturforsch.a: 70(2015) 465-470.

[23] Qinying Huang, Haiyan Chen*, Qingying Deng, Resistance Distance and the Kirchhoff Index in Double Graphs. J. Appl. Math. Comput. (2016), 50: 1-14.

[24] Haiyan Chen*, Fuji Zhang, The critical group of a clique-inserted graph, Discrete Mathematics 319 (2014), 24-32.

[25] Qingying Deng, Haiyan Chen*, On extremal complement of a bipartite unicyclic

graphs, Linear Algebra and its Applications, 444(2014) 88-99.

[26] Haiyan Chen*, Fuji Zhang, Height probabilities in the Abelian sandpile model on the generalized finite Bethe lattice, Journal of Mathematical Physics, 54(2013) 083503-14.

[27] Qingying Deng, Haiyan Chen*, On the Kirchhoff index of the complement of a bipartite graph, Linear Algebra and its Applications, 439(2013) 167-173.

[28] Haiyan Chen*, Random walks and the effective resistance sum rules, Discrete Applied Mathematics, 158(2010) 1691-1700.

[29] Haiyan Chen*, Fuji Zhang, The expected hitting times for finite Markov chains, Linear Algebra and its Applications, 428(2008) 2730-2749.

[30] Haiyan Chen*, Fuji Zhang, Resistance distance local rules, Journal of Mathematical Chemical, 44(2008) 405-417.

[31] Haiyan Chen*, Fuji Zhang, Resistance distance and the normalized Laplacian spectrum, Discrete Applied Mathematics, 155(2007) 654-661.

[32] Haiyan Chen*, The generating functions of hitting times for random walk on trees, Statistics and Probability Letters, 77(2007) 1574-1579.

[33] Haiyan Chen*, Fuji Zhang, The rapid mixing of random walks defined by n -cube, Advances in Applied Mathematics, 33(2004) 136-145.

[34] Haiyan Chen*, Fuji Zhang, The expected hitting times for graphs with cut-points, Statistics and Probability Letters, 66(2004) 9-17.

■ 荣誉奖励及参加学术团体的情况

1. 2004 年集美大学青年教师教学竞赛一等奖；
2. 2015 年厦门市“五一”劳动奖章获得者；
3. 福建省运筹学会的理事；
4. 福建省硕士指导团队的成员。

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