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Department of Mathematics and Statistics
University of Victoria
Victoria, BC V8W 2Y2, Canada

EDUCATION

2017 Ph.D., Mathematics, Iowa State University (ISU)

Advisor: Leslie Hogben & Steve Butler

2011 M.S., Mathematics, National Taiwan University (NTU)

Advisor: Gerard Jennhwa Chang

2009 B.S., Mathematics, National Taiwan Normal University (NTNU)

RESEARCH INTERESTS

Graph theory and matrix theory; combinatorics; the inverse eigenvalue problem; spectral graph theory.

EMPLOYMENT/FELLOWSHIPS

2017–present Post-doctoral Fellow, University of Victoria (UVic)

2016 Spring Wolfe fellowship, ISU

2014 Fall Long-term visitor, Institute of Mathematics and its Application (IMA)

2013–2017 Teaching/research assistant, ISU

2012–2013 Research assistant, The National Center for Theoretical Sciences, Taipei Office (NCTS/TPE)

2009–2011 Teaching/research assistant, NTU

HONORS

2017 Zaffarano Prize for Graduate Student Research, ISU

2016 Graduate college research excellence award, ISU

2016 Graduate college teaching excellence award, ISU

2013–2016 Government scholarship, Ministry of Education, Taiwan

2011 Excellent thesis award, Symposium for Young Combinatorists, Taiwan

2010 Scholarship of Mr. Dun-Fu Hu, NTU

2005–2008 Excellent student scholarship, NTNU

PUBLICATIONS

Appeared/Accepted

11. W. Barrett, S. M. Fallat, H. T. Hall, L. Hogben, J. C.-H. Lin, and B. Shader. Generalizations of the Strong Arnold Property and the minimum number of distinct eigenvalues of a graph. *Electron. J. Combin.*, 24:P2.40, 2017.
10. A. Berliner, C. Bozeman, S. Butler, M. Catral, L. Hogben, B. Kroschel, J. C.-H. Lin, N. Warnberg, and M. Young. Zero forcing propagation time on oriented graphs. *Discrete Appl. Math.*, 224:45–59, 2017.
9. M. Dairyko, L. Hogben, J. C.-H. Lin, J. Lockhart, D. Roberson, S. Severini, and M. Young. Note on von Neumann and Rényi entropies of a graph. *Linear Algebra Appl.*, 521:240–253, 2017.
8. J. C.-H. Lin. Using a new zero forcing process to guarantee the Strong Arnold Property. *Linear Algebra Appl.*, 507:229–250, 2016.
7. S. Butler, C. Erickson, L. Hogben, K. Hogenson, L. Kramer, R. L. Kramer, J. C.-H. Lin, R. R. Martin, D. Stolee, N. Warnberg, and M. Young. Rainbow arithmetic progressions. *J. Comb.*, 7:595–626, 2016.
6. G. Aalipour, A. Abiad, Z. Berikkyzy, J. Cummings, J. De Silva, W. Gao, K. Heysse, L. Hogben, F. H. J. Kenter, J. C.-H. Lin, and M. Tait. On the distance spectra of graphs. *Linear Algebra Appl.*, 497:66–87, 2016.
5. J. C.-H. Lin. Odd cycle zero forcing parameters and the minimum rank of graph blowups. *Electron. J. Linear Algebra*, 31:42–59, 2016.
4. C. Bozeman, A. Ellsworth, L. Hogben, J. C.-H. Lin, G. Maurer, K. Nowak, A. Rodriguez, and J. Strickland. Minimum rank of graphs with loops. *Electron. J. Linear Algebra*, 27:907–934, 2014.
3. J. C.-H. Lin. The sieving process and lower bounds for the minimum rank problem. *Congr. Numer.*, 219:73–88, 2014.
2. G. J. Chang and J. C.-H. Lin. Counterexamples to an edge spread question for zero forcing number. *Linear Algebra Appl.*, 446:192–195, 2014.
1. J. C.-H. Lin. Some interpretations and applications of Fuss-Catalan numbers. *ISRN Discrete Math.*, 2011. doi:10.5402/2011/534628.

Submitted

a. C. A. Alfaro and J. C.-H. Lin. Critical ideals, minimum rank and zero forcing number. `http://arxiv.org/abs/1710.03386`. (under review).
b. F. H. J. Kenter and J. C.-H. Lin. On the error of a priori sampling: Zero forcing sets and propagation time. `http://arxiv.org/abs/1709.08740`. (under review).
c. R. Anderson, S. Bai, F. Barrera-Cruz, É. Czabarka, G. Da Lozzo, N. L. F. Hobson, J. C.-H. Lin, A. Mohr, H. C. Smith, L. A. Székely, and H. Whitlatch. Analogies between the crossing number and the tangle crossing number. `http://arxiv.org/abs/1709.08119`. (under review).

d. W. Barrett, S. Butler, S. M. Fallat, H. T. Hall, L. Hogben, J. C.-H. Lin, B. Shader, and M. Young. The inverse eigenvalue problem of a graph: Multiplicities and minors. `https://arxiv.org/abs/1708.00064`. (under review).

e. J. C.-H. Lin. Zero forcing number, Grundy domination number, and their variants. `http://arxiv.org/abs/1706.00798`. (under review).

f. L. Hogben, J. C.-H. Lin, and M. Young. Multi-part Nordhaus-Gaddum type problems for tree-width, Colin de Verdière type parameters, and Hadwiger number. `http://arxiv.org/abs/1604.08817`. (under review).

g. G. Aalipour, A. Abiad, Z. Berikkyzy, L. Hogben, F. H. J. Kenter, J. C.-H. Lin, and M. Tait. Proof of a conjecture of Graham and Lovász concerning unimodality of coefficients of the distance characteristic polynomial of a tree. `http://arxiv.org/abs/1507.02341`. (under review).

h. G. J. Chang and J. C.-H. Lin. Minimum rank of powers of cycles and trees. (under review).

PRESENTATIONS

Plenary Lectures

2017 "Variants of Zero Forcing," AIM Workshop: Zero forcing and its applications, San Jose, CA.

Invited for Special Sessions/Mini Symposia

2018 "The inverse eigenvalue problem of a graph: Multiplicities and minors," Joint Mathematics Meetings, to be held in San Diego, CA.

2016 "Distance Spectra of Graphs," AMS Fall Central Sectional Meeting, Minneapolis, MN.

2016 "Distance Spectra of Graphs," Symposium for Young Combinatorists, Taiwan.

2016 "Using a new zero forcing process to guarantee the Strong Arnold Property," 20th International Linear Algebra Society Conference, Leuven, Belgium.

2016 "Using a new zero forcing process to guarantee the Strong Arnold Property," AMS Spring Central Sectional Meeting, Fargo, ND.

2016 "Odd cycle zero forcing parameters and the minimum rank problem," 47th Southeastern International Conference on Combinatorics, Graph Theory, and Computing, Boca Raton, FL.

2014 "Reduction identities of the minimum rank on loop graphs," 19th International Linear Algebra Society Conference (Satellite Conference of International Congress of Mathematicians 2014), Seoul, S. Korea.

Contributed

2017 "Note on von Neumann and Rényi entropies of a graph," 21th International Linear Algebra Society Conference, Ames, IA.

2017 "Note on von Neumann and Rényi entropies of a graph," Graduate Student Combinatorics Conference, Lawrence, KS.

2017 "The minimum rank problem on loop graphs," Joint Mathematics Meetings, Atlanta, GA.

2016 "Using a new zero forcing process to guarantee the Strong Arnold Property," Western Canada Linear Algebra Meeting, Winnipeg, MT, Canada.

2015 "Odd cycle zero forcing parameters and the minimum rank problem," Connections in Discrete Mathematics, Vancouver, BC, Canada.

2014 "The sieving process and lower bounds for the minimum rank problem," 45th Southeastern International Conference on Combinatorics, Graph Theory, and Computing, Boca Raton, FL.

2011 "Applications of zero forcing number to the minimum rank problem," Symposium for Young Combinatorists, Taiwan.

2009 "Some combinatorial interpretations and applications of Fuss-Catalan numbers," Annual Meeting of the Taiwan Mathematical Society.

WORKSHOPS/PROGRAMS/CONFERENCES

2017 AMS Mathematics Research Communities on Beyond planarity: Crossing numbers of graphs, Snowbird Resort, UT.

2017 AIM Workshop: Zero forcing and its applications, San Jose, CA.

2016 BIRS Focused Research Group: The inverse eigenvalue problem of a graph, Banff, AB, Canada.

2016 Recent Advances in Linear Algebra and Graph Theory, Chattanooga, TN.

2016 Networked Life: Celebrating the life and career of Fan Chung and Ron Graham, San Diego, CA.

2015 Advanced Course on Combinatorial Matrix Theory, Barcelona, Spain.

2015 Graduate Research Workshop in Combinatorics (GRWC), Ames, IA.

2014 IMA Workshop: Geometric and enumerative combinatorics, Minneapolis, MN.

2014 IMA Workshop: Additive and analytic combinatorics, Minneapolis, MN.

2014 IMA Workshop: Probabilistic and extremal combinatorics, Minneapolis, MN.

2009 Summer Research Program on Combinatorics, Academia Sinica, Taiwan.

2004 Asian Pacific Mathematics Olympiad Training Camp, Taiwan.

TEACHING EXPERIENCE (Sole Instructor)

2017 Calculus for Students in the Social and Biological Sciences

2016 Calculus I

TEACHING ASSISTANT

2017 Enumerative Combinatorics

2015 Modern Graph Theory

2015 Calculus III

2015 Calculus for Business and Social Sciences