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## EMPLOYMENT

- 2026–present** Associate professor, NYCU
- 2022–2026** Associate professor, National Sun Yat-sen University (NSYSU)
- 2018–2022** Assistant professor, NSYSU
- 2017–2018** Post-doctoral fellow, University of Victoria (UVic)

## EDUCATION

- 2017** Ph.D., Mathematics, Iowa State University (ISU)
- 2011** M.S., Mathematics, National Taiwan University (NTU)
- 2009** B.S., Mathematics, National Taiwan Normal University (NTNU)

## RESEARCH INTERESTS

Spectral graph theory; inverse eigenvalue problem; network analysis; quantum information.

## HONORS

- 2026** Plenary Speaker (LAMA Lecture) at the 27th Conference of the International Linear Algebra Society, Blacksburg, VA
- 2019–2024** Young Scholar Fellowship (愛因斯坦培植計畫), Ministry of Science and Technology, Taiwan (於 2021 年獲選轉為 2030 跨世代新秀學者計畫)
- 2022** LAA Early Career Speaker at the 24th Conference of the International Linear Algebra Society, Galway, Ireland
- 2017** Zaffarano Prize for graduate student research, ISU

## PROFESSIONAL SERVICES

- Member, Board of Directors** of the International Linear Algebra Society (ILAS), 2025–present.
- Guest Editor** of *Linear Algebra and its Applications (ILAS2025 special issue)*, 2025–2026.
- Editor** of *Linear and Multilinear Algebra*, 2024–present.
- Associate Editor** of the *Electronic Journal of Linear Algebra*, 2023–present.
- Referee** for *Linear Algebra and its Applications*, *Journal of Combinatorial Optimization*, *Discrete Optimization*, *Special Matrices*, and *Discrete Applied Mathematics*, etc.
- Local Organizer (Chair)** of the 26th Conference of ILAS, 2025.
- Assistant Conference Coordinator** of the 21th Conference of ILAS, 2017.

## PUBLICATIONS

APPEARED/ACCEPTED

35. A. Laikhuram and J. C.-H. Lin. Inverse eigenvalue problem for discrete Schrödinger operators of a graph. *Linear Algebra Appl.*, 730:566–586, 2026.
34. S. M. Fallat, H. Gupta, and J. C.-H. Lin. Inverse eigenvalue problem for Laplacian matrices of a graph. *SIAM J. Matrix Anal. Appl.*, 46:1866–1886, 2025.
33. A. Abiad, B. A. Curtis, M. Flagg, H. T. Hall, J. C.-H. Lin, and B. Shader. The inverse nullity pair problem and the strong nullity interlacing property. *Linear Algebra Appl.*, 699:539–568, 2024.
32. C. Erickson, L. Gan, J. Kritschgau, J. C.-H. Lin, and S. Spiro. Complementary vanishing graphs. *Linear Algebra Appl.*, 692:185–211, 2024.
31. P. Hell, J. Huang, and J. C.-H. Lin. Strong cocomparability graphs and slash-free orderings of matrices. *SIAM J. Discrete Math.*, 38:828–844, 2024.
30. J. C.-H. Lin, P. Oblak, and H. Šmigoc. The liberation set in the inverse eigenvalue problem of a graph. *Linear Algebra Appl.*, 675:1–28, 2023.
29. S. M. Fallat, H. T. Hall, J. C.-H. Lin, and B. Shader. The bifurcation lemma for strong properties in the inverse eigenvalue problem of a graph. *Linear Algebra Appl.*, 648:70–87, 2022.
28. J. C.-H. Lin, P. Oblak, and H. Šmigoc. On the inverse eigenvalue problem for block graphs. *Linear Algebra Appl.*, 631:379–397, 2021.
27. F. H. J. Kenter and J. C.-H. Lin. A zero forcing technique for bounding sums of eigenvalue multiplicities. *Linear Algebra Appl.*, 629:138–167, 2021.
26. P. Hell, C. Hernandez-Cruz, J. Huang, and J. C.-H. Lin. Strong chordality of graphs with possible loops. *SIAM J. Discrete Math.*, 35:362–375, 2021.
25. L. Hogben, J. C.-H. Lin, D. D. Olesky, and P. van den Driessche. The sepr-sets of sign patterns. *Linear Multilinear Algebra*, 26:2044–2068, 2020.
24. P. Hell, J. Huang, J. C.-H. Lin, and R. M. McConnell. Bipartite analogues of comparability and cocomparability graphs. *SIAM J. Discrete Math.*, 34:1969–1983, 2020.
23. S. Butler, C. Erickson, S. M. Fallat, H. T. Hall, B. Kroschel, J. C.-H. Lin, B. Shader, N. Warnberg, and B. Yang. Properties of a  $q$ -analogue of zero forcing. *Graphs Combin.*, 36:1401–1419, 2020.
22. A. Chan, S. M. Fallat, S. Kirkland, J. C.-H. Lin, S. Nasserar, and S. Plosker. Complex Hadamard diagonalisable graphs. *Linear Algebra Appl.*, 605:158–179, 2020.
21. J. C.-H. Lin, P. Oblak, and H. Šmigoc. The strong spectral property for graphs. *Linear Algebra Appl.*, 598:68–91, 2020.
20. 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. *J. Combin. Theory Ser. B*, 142:276–306, 2020.
19. D. Ferrero, M. Flagg, H. T. Hall, L. Hogben, J. C.-H. Lin, S. Meyer, S. Nasserar, and B. Shader. Rigid linkages and partial zero forcing. *Electron. J. Combin.*, 26:#P2.43, 2019.

18. F. H. J. Kenter and J. C.-H. Lin. On the error of a priori sampling: Zero forcing sets and propagation time. *Linear Algebra Appl.*, 576:124–141, 2019.
17. C. A. Alfaro and J. C.-H. Lin. Critical ideals, minimum rank and zero forcing number. *Appl. Math. Comput.*, 358:305–313, 2019.
16. J. C.-H. Lin. Zero forcing number, Grundy domination number, and their variants. *Linear Algebra Appl.*, 563:240–254, 2019.
15. Y.-J. Cheng and J. C.-H. Lin. Graph families with constant distance determinant. *Electron. J. Combin.*, 25:#P4.45, 2018.
14. 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. *Electron. J. Combin.*, 25:#P4.24, 2018.
13. 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. *Electron. J. Linear Algebra*, 34:373–380, 2018.
12. J. C.-H. Lin, D. D. Olesky, and P. van den Driessche. Sign patterns requiring a unique inertia. *Linear Algebra Appl.*, 546:67–85, 2018.
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. Dairiko, 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.

#### BOOK/OTHERS

3. L. Hogben, J. C.-H. Lin, and B. Shader. *Inverse Problems and Zero Forcing for Graphs*. American Mathematical Society, Providence, 2022.
2. S. M. Fallat, L. Hogben, J. C.-H. Lin, and B. Shader. The inverse eigenvalue problem of a graph, zero forcing, and related parameters. *Notices Amer. Math. Soc.*, 67:257–261, February, 2020.
1. L. Hogben, J. C.-H. Lin, and B. Shader. The inverse eigenvalue problem of a graph. In *50 Years of Combinatorics, Graph Theory, and Computing*, 1st edition, F. Chung, R. Graham, F. Hoffman, L. Hogben, R. C. Mullin, and D. B. West editors, CRC Press, Boca Raton, 2019.

### SELECTED PRESENTATIONS

#### PLENARY LECTURES

- 2026** “Inverse problems on a graph: strong matrices and graph minors,” 27th International Linear Algebra Society Conference, Blacksburg, VA (LAMA Lecture).
- 2025** “Inverse problems on a graph: strong matrices and graph minors,” International Conference in Discrete Mathematics, Tiruchirappalli, India.
- 2017** “Variants of Zero Forcing,” AIM Workshop: Zero forcing and its applications, San Jose, CA.

#### INVITED FOR SPECIAL SESSIONS/MINI SYMPOSIA

- 2026** “Jacobian method and strong properties,” 27th International Linear Algebra Society Conference, Blacksburg, VA.
- 2025** “Inverse Fiedler vector problem of a graph,” 26th International Linear Algebra Society Conference, Kaohsiung, Taiwan.
- 2025** “Strong properties from a universal point of view,” Joint Mathematics Meetings, Seattle, WA.
- 2024** “The liberation set in the inverse eigenvalue problem of a graph,” Workshop on Matrices and Operators, Reno, NV.
- 2023** “The bifurcation lemma for strong properties in the inverse eigenvalue problem of a graph,” 25th International Linear Algebra Society Conference, Madrid, Spain.
- 2023** “The bifurcation lemma for strong properties in the inverse eigenvalue problem of a graph,” Joint Mathematics Meetings, Boston, MA.
- 2022** “Comparability and cocomparability bigraphs,” 24th International Linear Algebra Society Conference, Galway, Ireland (LAA early career speaker).

**2022** “On the inverse eigenvalue problem for block graphs,” Joint Mathematics Meetings, Seattle, WA.

**2021** “The strong spectral property for graphs,” SIAM Conference on Applied Linear Algebra with the embedded 23rd International Linear Algebra Society Conference, virtual.

**2021** “The strong spectral property for graphs,” Canadian Discrete and Algorithmic Mathematics Conference, virtual.

**2021** “The strong spectral property for graphs,” Joint Mathematics Meetings, virtual.

**2019** “Zero forcing number, Grundy domination number and their variants,” 22th International Linear Algebra Society Conference, Rio de Janeiro, Brazil.

**2018** “Graphs whose distance matrices have the same determinant,” SIAM Conference on Discrete Mathematics, Denver, CO.

**2018** “The inverse eigenvalue problem of a graph: Multiplicities and minors,” Joint Mathematics Meetings, San Diego, CA.

**2017** “General spectral graph theory: The inverse eigenvalue problem of a graph,” Combinatorial Potlatch, Victoria, BC, Canada.

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

**2016** “Distance Spectra of Graphs,” AMS Fall Central Sectional Meeting, Minneapolis, MN.

**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.