

Jihyeug Jang

Contact Information

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Research interest

Enumerative combinatorics and Algebraic combinatorics.

Employment

- Post-doc, University of Geneva, Jan. 2025 - present
 - Mentor: [Jehanne Dousse](#)
- Post-doc, Sungkyunkwan University, Mar. 2024 - Dec. 2024
 - Mentor: [Jang Soo Kim](#)

Education

- Ph.D. in Mathematics, Sungkyunkwan University, February 2024.
 - Advisor: [Jang Soo Kim](#)
- B.S. in Mathematics, Sungkyunkwan University, February 2017.

Publications and preprints

Preprints:

2. (with Jehanne Dousse, Frédéric Jouhet) Andrews–Gordon and Stanton type identities: bijective and Bailey lemma approaches
1. (with Benedek Dombos) Grounded partitions of type $A_1^{(1)}$ at levels 1 and 2: bijections, affine crystal graphs, and partition identities

Published:

10. (with Jang Soo Kim, Jianping Pan, Joseph Pappe, Anne Schilling) Hook-valued tableau uncrowding and tableau switching, *SIAM Journal on Discrete Mathematics*, Volume 40, Issue 1, (2026)
9. (with Minho Song) Combinatorics of orthogonal polynomials on the unit circle, *The Ramanujan Journal*, Volume 68, (2025)
8. (with Byung-Hak Hwang, Jang Soo Kim, Minho Song, U-keun Song) Refined canonical stable Grothendieck polynomials and their duals, Part 2, *European Journal of Combinatorics*, Volume 127, (2025)
7. (with Louis W. Shapiro, Minho Song) Combinatorial Reciprocity for Riordan Arrays, *Linear Algebra and its Applications*, (2025)
6. (with Mark Kempton, Sooyeong Kim, Adam Knudson, Neal Madras, Minho Song) Kemeny's constant and enumerating Braess edges in trees, *Linear and Multilinear Algebra*, 1-37, (2024)
5. (with Byung-Hak Hwang, Jang Soo Kim, Minho Song, U-keun Song) Refined canonical stable Grothendieck polynomials and their duals, Part 1, *Advances in Mathematics*, Volume 446, (2024)
4. (with Byung-Hak Hwang, Jaeseong Oh) A combinatorial model for the transition matrix between the Specht and web bases, *Forum of Mathematics, Sigma*, Volume 11, (2023), e82
3. (with Sooyeong Kim, Minho Song) Kemeny's constant and Wiener index on trees, *Linear Algebra and its Applications*, Volume 674, (2023), Pages 230-243
2. (with Donghyun Kim, Jang Soo Kim, Minho Song, U-keun Song) Negative moments of orthogonal polynomials, *Forum of Mathematics, Sigma*, Volume 11, (2023), e22
1. (with Jang Soo Kim) Volumes of flow polytopes related to caracol graphs, *Electronic J. Combin.*, Volume 27, Issue 4 (2020), P4.21

Conference proceedings:

3. (with Jang Soo Kim, Jianping Pan, Joseph Pappe, Anne Schilling) A hidden symmetry of refined canonical stable Grothendieck polynomials, *Séminaire Lotharingien de Combinatoire*, 93B#18, (2025)
2. (with Byung-Hak Hwang, Jang Soo Kim, Minho Song, U-keun Song) Refined canonical stable Grothendieck polynomials and their duals, *Séminaire Lotharingien de Combinatoire*, 89B#31, (2023)
1. (with Byung-Hak Hwang, Jaeseong Oh) A combinatorial model for the transition matrix between the Specht and web bases, *Séminaire Lotharingien de Combinatoire*, 86B#34, (2022)

Talks and posters

25. Grounded partitions of type $A_1^{(1)}$ at levels 1 and 2, **Special seminar**, Sungkyunkwan University, Korea, Jan 20, (2026)
24. Decompositions of integer powers via the Catalan and Motzkin arrays and odd-indexed Fibonacci numbers, **Joint Mathematics Meetings 2026**, Washington, D.C., USA, Jan 4-7, (2026)
23. Andrews–Gordon and Stanton type identities: bijective and Bailey lemma approaches, **SLC 94**, Bad Boll, Germany, Sep 14-17, (2025)

22. Andrews–Gordon and Stanton type identities: bijective and Bailey lemma approaches, [Special seminar](#), Sungkyunkwan University, Korea, Aug 1, (2025)
21. A hidden symmetry of refined canonical stable Grothendieck polynomials (poster), [FPSAC 2025](#), Hokkaido University, Sapporo, Japan, Jul 21-25, (2025)
20. Combinatorics of the orthogonal polynomials on the unit circle, [Workshop on Combinatorics and Probability](#), Korea, Jun 27-28, (2024)
19. Combinatorial reciprocity for Riordan arrays, [1st Combinatorics Seminar for Young Researchers](#), Inha University, Korea, Jun 19, (2024)
18. Combinatorial reciprocity for Riordan arrays, [9th International Symposium on Riordan Arrays and Related Topics](#), Howard University, USA, Jun 3-5, (2024)
17. Lattice on permutation tableaux, [Topology and Combinatorics seminar at Ajou University](#), Online, May 16, (2024)
16. A trim lattice on permutation tableaux, [2024 KMS Spring Meeting](#), Korea, Apr 18-20, (2024)
15. Refined canonical stable Grothendieck polynomials and their duals (poster), [FPSAC 2023](#), UC Davis, California, USA, Jul 17-21, (2023)
14. Volumes of flow polytopes related to caracol graphs, [Séminaire DGeCo](#), Sorbonne Université, France, Apr 18, (2023)
13. Negative moments of orthogonal polynomials, [Journée-séminaire de combinatoire](#), Université Paris 13, France, Apr 11, (2023)
12. Negative moments of orthogonal polynomials (poster), [89th Séminaire Lotharingien de Combinatoire and Brenti Fest](#), Centro Residenziale Universitario di Bertinoro, Italy, Mar 26-29, (2023)
11. On sequences related to the pallet loading problem, [AORC Monthly Seminar](#), Online, Jan 27, (2023)
10. On sequences related to the pallet loading problem, [The 26th KIAS Workshop on Combinatorics](#), Shilla Stay Haeundae, Korea, Dec 20-22, (2022)
9. A combinatorial model for the transition matrix between the Specht and web bases, [Physical Algebra and Combinatorics Seminar](#), Online, Aug 12, (2022)
8. A combinatorial model for the transition matrix between the Specht and web bases (poster), [FPSAC 2022](#), Indian Institute of Science, Bangalore, India, Jul 18-22 (2022)
7. A combinatorial model for the transition matrix between the Specht and web bases, [One-day workshop on web bases](#), Online, Dec 16, (2021)
6. Refined canonical stable Grothendieck polynomials and their duals, [2021 Annual Meeting on the Kangwon-Kyungki Mathematical Society](#), Korea, Jul 16, (2021)
5. Volumes of flow polytopes related to the caracol graphs, [CanaDAM 2021 – Online Meeting](#), Online, May 25-28, (2021)
4. A permutation interpretation of the transition matrix between the polytabloid and web bases, [2021 KMS Spring Meeting](#), Online, Apr 29-30, (2021)
3. Computing volumes of flow polytopes using labeled Dyck paths, [2019 Combinatorics Workshop](#), Songdo, Incheon, Korea, Aug 13-15, (2019)

2. Computing volumes of flow polytopes using labeled Dyck paths, [2019 Annual Meeting on the Kangwon-Kyungki Mathematical Society](#), Daegu, Korea, Jun 28-30, (2019)
1. Combinatorial proof of two constant term identities, [Workshop on Algebraic and Enumerative Combinatorics](#), Shinshu University, Japan, Jan 15-17, (2019)

Program Languages

- [SageMath](#)