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

Submitted:

1. (with Jang Soo Kim, Jianping Pan, Joseph Pappe, Anne Schilling) Hook-valued tableaux uncrowding and tableau switching
2. (with Minho Song) Combinatorics of orthogonal polynomials on the unit circle
3. (with Jehanne Dousse, Frédéric Jouhet) Andrews–Gordon and Stanton type identities: bijective and Bailey lemma approaches

Published:

1. (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)
2. (with Louis W. Shapiro, Minho Song) Combinatorial Reciprocity for Riordan Arrays, *Linear Algebra and its Applications*, (2025)
3. (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)
4. (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)
5. (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
6. (with Sooyeong Kim, Minho Song) Kemeny's constant and Wiener index on trees, *Linear Algebra and its Applications*, Volume 674, (2023), Pages 230-243
7. (with Donghyun Kim, Jang Soo Kim, Minho Song, U-keun Song) Negative moments of orthogonal polynomials, *Forum of Mathematics, Sigma*, Volume 11, (2023), e22
8. (with Jang Soo Kim) Volumes of flow polytopes related to caracol graphs, *Electronic J. Combin.*, Volume 27, Issue 4 (2020), P4.21

Talks and posters

1. Combinatorics of the orthogonal polynomials on the unit circle, Workshop on Combinatorics and Probability, Korea, Jun 27-28, (2024)
2. Combinatorial reciprocity for Riordan arrays, 1st Combinatorics Seminar for Young Researchers, Inha University, Korea, Jun 19, (2024)
3. Combinatorial reciprocity for Riordan arrays, 9th International Symposium on Riordan Arrays and Related Topics, Howard University, USA, Jun 3-5, (2024)
4. Lattice on permutation tableaux, Topology and Combinatorics seminar at Ajou University, Online, May 16, (2024)
5. A trim lattice on permutation tableaux, 2024 KMS Spring Meeting, Korea, Apr 18-20, (2024)
6. Refined canonical stable Grothendieck polynomials and their duals (poster), FPSAC 2023, UC Davis, California, USA, Jul 17-21, (2023)
7. Volumes of flow polytopes related to caracol graphs, Séminaire DGeCo, Sorbonne Université, France, Apr 18, (2023)
8. Negative moments of orthogonal polynomials, Journée-séminaire de combinatoire, Université Paris 13, France, Apr 11, (2023)
9. Negative moments of orthogonal polynomials (poster), 89th Séminaire Lotharingien de Combinatoire and Brenti Fest, Centro Residenziale Universitario di Bertinoro, Italy, Mar 26-29, (2023)
10. On sequences related to the pallet loading problem, AORC Monthly Seminar , Online, Jan 27, (2023)

11. On sequences related to the pallet loading problem, The 26th KIAS Workshop on Combinatorics, Shilla Stay Haeundae, Korea, Dec 20-22, (2022)
12. A combinatorial model for the transition matrix between the Specht and web bases, Physical Algebra and Combinatorics Seminar, Online, Aug 12, (2022)
13. 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)
14. A combinatorial model for the transition matrix between the Specht and web bases, One-day workshop on web bases, Online, Dec 16, (2021)
15. Refined canonical stable Grothendieck polynomials and their duals, 2021 Annual Meeting on the Kangwon-Kyungki Mathematical Society, Korea, Jul 16, (2021)
16. Volumes of flow polytopes related to the caracol graphs, CanaDAM 2021 – Online Meeting, Online, May 25-28, (2021)
17. A permutation interpretation of the transition matrix between the polytabloid and web bases, 2021 KMS Spring Meeting, Online, Apr 29-30, (2021)
18. Computing volumes of flow polytopes using labeled Dyck paths, 2019 Combinatorics Workshop, Songdo, Incheon, Korea, Aug 13-15, (2019)
19. Computing volumes of flow polytopes using labeled Dyck paths, 2019 Annual Meeting on the Kangwon-Kyungki Mathematical Society, Daegu, Korea, Jun 28-30, (2019)
20. Combinatorial proof of two constant term identities, Workshop on Algebraic and Enumerative Combinatorics, Shinshu University, Japan, Jan 15-17, (2019)

Program Languages

- SageMath