

# GRAPHICAL MODELS IN ALGEBRAIC COMBINATORICS

Summer Graduate School, MSRI/SLMath, June 23 to July 3, 2025

## Recommended Preparatory Reading

- [1] S. FOMIN, Total positivity and cluster algebras, in *Proceedings of the International Congress of Mathematicians. Volume II* (Hyderabad, India, 2010), R. BHATIA et al., eds., Hindustan Book Agency, New Delhi, India, 2010, ISBN 978-81-85931-08-3; 978-981-4324-32-8; 981-4324-32-9, pp. 125–145. [MR](#) [Zbl](#) [arXiv](#).
- [2] M. GILLESPIE, [Variations on a theme of Schubert calculus](#), in *Recent trends in algebraic combinatorics*, H. BARCELO et al., eds., Association for Women in Mathematics Series **16**, Springer, Cham, Switzerland, 2019, ISBN 978-3-030-05141-9; 978-3-030-05140-2, pp. 115–158. [MR](#) [Zbl](#) [arXiv](#).
- [3] P. ZINN-JUSTIN, [Integrability and combinatorics](#), in *Encyclopedia of mathematical physics, Volume 3*, R. SZABO and M. BOJOWALD, eds., Elsevier, Amsterdam, Netherlands, 2nd ed., 2025, ISBN 978-0-323-95706-9, pp. 127–144. [arXiv](#).
- [4] D. BRESSOUD and J. PROPP, [How the alternating sign matrix conjecture was solved](#), *Notices Amer. Math. Soc.* **46** (1999), no. 6, 637–646. [MR](#) [Zbl](#)
- [5] D. A. HUDEC, *The Grassmannian as a projective variety*, University of Chicago REU, 2007.
- [6] C. PROCESI, *Lie groups: An approach through invariants and representations*, Universitext, pp. 241–246, Springer, Cham, Switzerland, 2007, ISBN 978-0-387-26040-2; 0-387-26040-4. [MR](#) [Zbl](#)