

Workshop on Combinatorial Hopf Algebras  
and Macdonald Polynomials

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# Dual graded graphs arising from combinatorial Hopf algebras

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## **Abstract**

Dual graded graphs are Fomin's generalization of Stanley's differential posets; they formalize conditions under which one may obtain Schensted-type bijections and the associated enumerative identities. We observe that under some mild assumptions, combinatorial Hopf algebras naturally give rise to dual graded graphs. We give examples from symmetric functions, Kac-Moody Schubert calculus, and quasisymmetric functions.

*This is joint with Thomas Lam.*