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Florian Block* (block@math.berkeley.edu), UC Berkeley, and **Lothar Göttsche** (gottsche@ictp.it), International Centre for Theoretical Physics, Trieste, Italy. *Fock Space, Feynman Diagrams, Floor Diagrams, and (Refined) Severi Degrees.*

We compute the degree of the Severi variety by considering the action of a non-commutative (Heisenberg) algebra on its Fock space. This results in a combinatorial computation of the Severi degree in terms of Feynman diagrams. These diagrams are essentially the floor diagrams arising in tropical geometry. (Received September 09, 2013)