

# Mathematics Department Colloquium

Organizer(s): Kenneth Ribet

Thursday, 4:10–5:00pm, 60 Evans

---

Oct. 15     **Hannah Markwig**, Göttingen

*Wall-crossing formulas for tropical Hurwitz numbers*

Hurwitz numbers count genus- $g$ , degree- $d$  covers of the projective line with a specified ramification profile over a fixed set of points. In joint work with Renzo Cavalieri and Paul Johnson, we use ideas from tropical geometry to compute Hurwitz numbers by counting certain weighted graphs satisfying a balancing condition. Our graph formalism helps to answer questions about the structure of double Hurwitz numbers. We show that they are piecewise polynomial, and we prove wall-crossing formulas, which are new when  $g > 0$ .