1171-05-58 **Abdul Basit***, abasit@iastate.edu, and **David Galvin**. *The independence polynomial of the random tree.*

The independence polynomial of a graph is not in general well-behaved — Alavi et al. showed, for example, that its coefficient sequence can exhibit arbitrary patterns of rises and falls. For some restricted families, things are much nicer — Hamidoune, for example, showed that for claw-free graphs the coefficient sequence is log-concave.

In 1987, Alavi, Malde, Schwenk and Erd$\{\ddot{o}\}$s asked whether trees and forests have independence polynomials with log-concave coefficient sequences. I'll present some recent work around this problem, joint with David Galvin, where we study the independence polynomial of the uniform random tree. (Received August 06, 2021)