

MATH OVERFLOW LIVE!

FALL 2024 IAS: GEOMETRY OF MATROIDS WORKSHOP

- How should one think about the Kazhdan–Lusztig polynomial of a matroid? Is there a nice intuition or way to interpret them? What’s their main motivation?
- Is there a natural way to view the characteristic polynomial of a matroid (or at least the chromatic polynomial) as the Hilbert polynomial of a graded module?
- What are some examples of sequences that seemed unimodal/log-concave for many matroids but turned out not to be in general?
- Is $\overline{M}_{0,n}$ Frobenius split?
- What is an ordered blueprint, and why are ordered blueprints interesting/useful?
- What is the status of Dyer’s conjecture? (Dyer, Kazhdan–Lusztig–Stanley polynomials and quadratic algebras)
- Why would one care about non-representable matroids?
- Why is modularity not part of definition of a matroid?