
GRAHAM FARR, Monash University (Australia)

Transforms, minors, binary functions and generalised Tutte polynomials

We introduce a family of transforms that extends graph- and matroid-theoretic duality. Associated with each such transform are generalised minor operations, which extend deletion and contraction in graphs. We establish how the transforms interact with our generalised minors, extending the classical matroid-theoretic relationship between duality and minors. Composition of the transforms is shown to correspond to complex multiplication of appropriate parameters.