TROPICAL OBSTRUCTIONS TO STABLE RATIONALITY

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Abstract: It is an old and thorny problem in algebraic geometry to determine which projective hypersurfaces are rational, or, more generally, stably rational, meaning that they become rational when we take the product with a projective space of sufficiently large dimension. After summarizing the principal known results, I will explain how one can use degeneration techniques and tropical methods to find new classes of non-stably rational hypersurfaces and complete intersections.
This talk is based on joint work with John Christian Ottem.