Abstract: The degree of irrationality of a variety is the minimal degree of a dominant rational map from the variety to a projective space of the same dimension. In this talk, I will discuss one relatively new method of bounding the degree of irrationality of some surfaces, using a connection between the irrationality of the surface and the tilt stability of certain rank three sheaves on threefolds. This method is sufficient, for instance, to show that the degree of irrationality of a very general genus 5 K3 surface is 4.