ON CREMONA EQUIVALENCE, RECTIFIABILITY AND RIGIDITY

Two subvarieties of $\mathbb{P}^n$ are *Cremona-equivalent* if there is a birational transformation of $\mathbb{P}^n$ for which one of them is a proper transform of the other. The simple question which curves in the projective plane are Cremona equivalent to a line (i.e. which ones are *rectifiable*) turned out to be very hard. I will show modern proofs of the classical criteria for rectifiability by Coolidge and Kumar-Murthy and the relation of rectifiability to the Rigidity Conjecture by Flenner-Zaidenberg and to the negativity conjecture of mine. If time permits, I will show some ideas to attack these problems.

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