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Lindsay Erickson* (lindsay@math.washington.edu). *Rational Pairs: Motivation and Results*. Preliminary report.

I will first discuss János Kollár and Sándor Kovács's recent work defining rational singularities for pairs (X, D) , where X is a normal variety and D is a reduced divisor. Then I'll introduce some new work towards understanding these singularities of pairs. In 1978 Renée Elkik proved that rational singularities of varieties are in some sense deformation invariant: given a flat family of varieties, if a fiber over a smooth point has rational singularities, then the nearby fibers do too. I will present an analogue of this theorem for rational pairs. (Received August 30, 2013)