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Joe Kileel* (jkileel@math.berkeley.edu), **Zuzana Kukelova**, **Tomas Pajdla** and **Bernd Sturmfels**. *Distortion Varieties*.

We discuss a project at the interface of computer vision and algebraic geometry. Work with Zuzana Kukelova, Tomas Pajdla and Bernd Sturmfels introduces the distortion varieties of a given projective variety. These are parametrized by duplicating coordinates and multiplying them with monomials. We study their degrees and defining equations. Exact formulas are obtained for the case of one-parameter distortions, the case of most interest for modeling cameras with image distortion. (Received September 11, 2016)