

CRITICAL POINTS OF DEGENERATE POLYCONVEX ENERGIES

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In this talk we discuss regularity and compactness results for critical points of energies such as $\det(Du)^2$. In particular, we show that the differential inclusion associated with this problem is quasiconvex, answering a conjecture by Kirchheim, Muller and Sverak from 2002. Our results suggest that the regularity theory for polyconvex energies may be substantially better in the isotropic case than in the general case. Based on joint work with Riccardo Tione.