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Optimality Conditions for Nonconvex Variational Problems Relaxed in Terms of Young Measures.

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Abstract: The scalar nonconvex variational problems of the minimum-energy type on Sobolev spaces are studied. As the Euler–Lagrange equation dramatically looses selectivity when extended in terms of the Young measures, the correct optimality conditions are sought by means of the convex compactification theory. It turns out that these conditions basically combine one part from the Euler–Lagrange equation with one part from the Weierstrass condition.

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