

UNIVERSAL SINGULAR SETS IN ONE-DIMENSIONAL CALCULUS OF VARIATIONS

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After a brief overview of classical results on (existence and) regularity of minimizers $u : R \rightarrow R$ of $\int_a^b L(x, u(x), u'(x))dx$, I will report on a recent analysis of these results (joint with M. Csörnyei, B. Kirchheim, T.C. O'Neil and S. Winter; to appear in Archive for Rational Mechanics and Analysis). This includes a nearly complete description of so called universal singular sets.