

LINEAR-GROWTH VARIATIONAL INTEGRALS WITH MEASURES

THOMAS SCHMIDT

The talk will present semicontinuity and existence results in BV for linear-growth scalar convex variational integrals with additional measure terms. The additional terms mean that, on the level of the Euler-Lagrange equation, a signed measure on the right-hand side can be dealt with. The results apply under certain isoperimetric conditions which are close to being necessary and sufficient. In particular, these include lower-dimensional measures up to the case of measures supported on hypersurfaces, where the latter limit case is most interesting, since it allows for maximum interaction between measure terms and total-variation-like terms. The talk is based on joint work with E. Ficola, which regains and extends parallel results of G.P. Leonardi and G.E. Comi for the area functional with additional measure terms.