

**Joan Cerdà**

*Universitat de Barcelona, Spain*

### **Capacitary Riesz-Herz and Wiener-Stein estimates**

We prove a Riesz-Herz estimate for the maximal function associated to a capacity  $C$  on  $\mathbb{R}^n$ ,  $M_C f(x) = \sup_{Q \ni x} C(Q)^{-1} \int_Q |f|$ , which extends the equivalence  $(Mf)^*(t) \simeq f^{**}(t)$  for the usual Hardy-Littlewood maximal function  $Mf$ . The proof is based on an extension of the Wiener-Stein estimates for the distribution function of the maximal function, obtained using a convenient family of dyadic cubes. As a byproduct we obtain a description of the norm of the interpolation space  $(L^1, \mathcal{L}^{1,C})_{1/p', p}$ , where  $\mathcal{L}^{1,C}$  denotes the Morrey space based on a capacity.