cases	doc_1		doc_2		decision	id
	authors	• Enrico Pasqualetto	**authors**	• Enrico Pasqualetto	DUPLICATES	68
	title	Testing the Sobolev property with a single test plan	**title**	Testing the Sobolev property with a single test plan		
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	id	id-1996616988908696339	**id**	id-2527648929219527050		
	abstract	We prove that in a vast class of metric measure spaces (namely, those whose associated Sobolev space is separable) the following property holds: a single test plan can be used to recover the minimal weak upper gradient of any Sobolev function. This means that, in order to identify which are the exceptional curves in the weak upper gradient inequality, it suffices to consider the negligible sets of a suitable Borel measure on curves, rather than the ones of the p-modulus. Moreover, on $\sf RCD$ spaces we can improve our result, showing that the test plan can be also chosen to be concentrated on an equi-Lipschitz family of curves.	**abstract**	We prove that in a vast class of metric measure spaces (namely, those whose associated Sobolev space is separable) the following property holds: a single test plan can be used to recover the minimal weak upper gradient of any Sobolev function. This means that, in order to identify which are the exceptional curves in the weak upper gradient inequality, it suffices to consider the negligible sets of a suitable Borel measure on curves, rather than the ones of the p-modulus. Moreover, on RCD spaces we can improve our result, showing that the test plan can be also chosen to be concentrated on an equi-Lipschitz family of curves.		
	versions		**versions**			