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Absolute continuity with respect to a subset of an interval

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Abstract: The aim of this paper is to introduce a generalization of the classical absolute continuity to a relative case, with respect to a subset M of an interval I . This generalization is based on adding more requirements to disjoint systems $\{(a_k, b_k)\}_K$ from the classical definition of absolute continuity – these systems should be not too far from M and should be small relative to some covers of M . We discuss basic properties of relative absolutely continuous functions and compare this class with other classes of generalized absolutely continuous functions.

Keywords: absolute continuity; quasi-uniformity; acceptable mapping

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