Sobolev embedding, extension and regularity of domains

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The main objective of this talk is to describe the so-called measure density condition of a domain as a necessary condition for Sobolev embedding as well as Sobolev extension. The same will also be discussed for other Sobolev-type spaces like variable exponent Sobolev spaces, Orlicz-Sobolev spaces, Besov spaces and Triebel-Lizorkin spaces.