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Modulus on Networks and Metric Spaces, and the Essential Metric.

The study of Modulus originated in the plane, but there has been much recent work in the setting of networks. We will introduce the theory in this setting with some results on how Modulus relates to classical quantities. We will then introduce the theory in the context of general metric spaces and show how one of the relationships from the network setting holds in the metric space setting. We will also show how Modulus can be used to define a new metric that recovers a metric due to De Cecco and Palmieri. (Received September 20, 2018)