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Jun Kigami* (kigami@i.kyoto-u.ac.jp), Kyoto, Kyoto 606-8501, Japan. *Partition, volume doubling property and quasisymmetry on metric spaces*. Preliminary report.

In this talk, we will propose a legitimate definition of a partition of a compact metric space by a tree. Moreover, we give a notion of metrics which is adapted to given partition of the space. Under given adapted metric to a partition, an equivalent condition of a measure being volume doubling with respect to an adapted metric and an equivalent condition for another metric being quasisymmetric with respect to the given metric are studied. One of examples where this scheme can be applied is the self-similar sets. (Received November 28, 2011)