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Jun Kigami* (kigami@i.kyoto-u.ac.jp), Graduate School of Informatics, Kyoto University, 1-1 Yoshidahonmachi, Sakyo-ku, Kyoto, Kyoto 606-8501, Japan. *Partition of metrizable spaces by trees, volume doubling measures and quasisymmetry.*

In this talk, we will give a definition of partition of metrizable space by infinite trees and study the structures of spaces by means of the partition. We will give necessary and sufficient conditions for a measure to have the volume doubling property and for metrics to be quasisymmetric. This study can be thought of as an inverse problem of the construction of Dyadic cubes for spaces of homogeneous type by M. Christ. (Received August 12, 2015)