1172-43-127 **Trang T.T. Nguyen*** (`trang.t.nguyen1@mymail.unisa.edu.au`) and **Lesley Ward** (`lesley.ward@unisa.edu.au`). *Functions of bounded mean oscillation and quasisymmetric mappings on spaces of homogeneous type.*

Martin Reimann discovered a beautiful connection between quasiconformal mappings and functions of bounded mean oscillation. Namely, the logarithm of the Jacobian determinant of a quasiconformal mapping is always in BMO. In joint work with Lesley Ward, we have generalised Reimann's theorem from functions defined on Euclidean spaces $\mathbb{R}^n$ to those defined on spaces of homogeneous type $\widetilde{X} := (X, \rho, \mu)$, under certain conditions. As the analogue of quasiconformality we have used η-quasisymmetry.

In the course of proving this result, we first show that on $\widetilde{X}$, the logarithm of a reverse-Hölder weight w is in BMO($\widetilde{\text{X}}$), and that the above-mentioned connection holds on metric measure spaces $\widehat{X} := (X, d, \mu)$.

Furthermore, we construct a large class of spaces (X, ρ, μ) to which our results apply. (Received August 23, 2021)