

1078-51-254

Zair Ibragimov* (zibragimov@fullerton.edu), 800 N. State College Blvd., MH 154, Fullerton, CA 92831. *Hyperbolization of metric spaces.*

It was proved by M. Bonk, J. Heinonen and P. Koskela that the quasihyperbolic metric hyperbolizes (in the sense of Gromov) uniform metric spaces. In this paper we introduce a new metric that hyperbolizes all locally compact noncomplete metric spaces. The metric is generic in the sense that (1) it can be defined on any metric space; (2) it preserves the quasiconformal geometry of the space; (3) it generalizes the j -metric, the hyperbolic cone metric and the hyperbolic metric of hyperspaces; and (4) it is quasi-isometric to the quasihyperbolic metric of uniform metric spaces. In particular, the Gromov hyperbolicity of these metrics also follows from that of our metric. (Received December 10, 2011)