# A CRITERION FOR THE UNIQUE DETERMINATION OF DOMAINS IN EUCLIDEAN SPACES BY THE METRICS OF THEIR BOUNDARIES INDUCED BY THE INTRINSIC METRICS OF THE DOMAINS

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We say that a domain $U \subset \mathbb{R}^n$ is uniquely determined by the relative metric (which is the extension by continuity of the intrinsic metric of the domain on its boundary) of its Hausdorff boundary if any domain $V \subset \mathbb{R}^n$ such that its Hausdorff boundary is isometric in the relative metric to the Hausdorff boundary of $U$, is isometric to $U$ in the Euclidean metric. In this paper, we obtain the necessary and sufficient conditions for the uniqueness of determination of a domain by the relative metric of its Hausdorff boundary.

*Key words and phrases*:  domain, Hausdorff limit, relative metric, intrinsic metric, uniqueness of determination.

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