1099-53-192

Christopher S Inbody^{*} (csinbody[@]unm.edu), 6301 Lamy St NW, Albuquerque, NM 87120. Positive Sasakian Structures on Links of Weighted Complete Intersection Singularities.

Links of isolated singularities defined by weighted homogeneous polynomials have a natural Sasakian structure. Since it is known that Sasaki-Einstein metrics have positive Ricci curvature, and since positive Sasakian structures give rise to Sasakian metrics with positive Ricci curvature, it is useful to determine which links have a positive Sasakian structure. This corresponds to the Fano index of the associated weighted projective variety being positive. Links of dimension 2n-1 are (n-2)-connected. In dimension 5, there is a complete classification of simply connected spin manifolds due to Smale. Hypersurface singularities yielding links of dimension 5 have been treated by Boyer, Galicki, Kollár, Nakamaye, and others. This paper investigates isolated singularities of codimension 2 complete intersections with 5 dimensional links of positive index and provides a complete list up to degree 600, hence a complete (up to degree 600) list of types of links having positive Sasakian structures. (Received February 08, 2014)