CHEN TYPE OF THE ISOPARAMETRIC HYPERSURFACES IN THE UNIT SPHERE

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We consider hypersurfaces of $S^{n+1}(1)$ which are of low Chen-type via the second standard immersion of the unit sphere. This means that the position vector in an appropriate Euclidean space of symmetric matrices can be decomposed into a sum of finite number (two, for 2-type, three for 3-type, etc.) of eigenfunctions of the Laplacian. Among all spherical hypersurfaces the isoparametric ones (constant principal curvatures) are the simplest and most studied. We syrvey results on the Chen-type of isoparametric hypersurfaces of low-type, specifically we examine the type of nonminimal cubic isoparametric hypersurfaces and a particular example with four principal curvatures.