

**Killing normal Jacobi operator on real hypersurfaces
in the complex hyperbolic quadric**

By HYUNJIN LEE (Daegu), IMSOON JEONG (Cheongju) and YOUNG JIN SUH (Daegu)

Abstract. In this paper, we introduce the notion of Killing normal Jacobi operator for real hypersurfaces in the complex hyperbolic quadric Q^{m*} , and we prove a non-existence theorem of Hopf real hypersurfaces with Killing normal Jacobi operator in Q^{m*} .

HYUNJIN LEE &
YOUNG JIN SUH
DEPARTMENT OF MATHEMATICS AND RIRC
KYUNGPOOK NATIONAL UNIVERSITY
DAEGU 41566
REPUBLIC OF KOREA

IMSOON JEONG
DEPARTMENT OF MATHEMATICS EDUCATION
CHEONGJU UNIVERSITY
CHUNGHEONGBUK-DO 28503
REPUBLIC OF KOREA

Mathematics Subject Classification: 53C40, 53C55.

Key words and phrases: Killing normal Jacobi operator, singular vector field, \mathfrak{A} -isotropic, \mathfrak{A} -principal, Kähler structure, complex hyperbolic quadric.